The Reserve Banks and the Money Market

THE RESERVE BANKS
AND THE
MONEY MARKET

By
W. RANDOLPH BURGESS

Revised Edition 1946

HARPER & BROTHERS PUBLISHERS
New York and London

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Printed in the United States of America

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INTRODUCTION TO FIRST EDITION

By Benjamin Strong*

The twenty years of discussion of banking and currency reform which preceded the enactment of the Federal Reserve Act showed the extent to which political and sectional dissension even to the point of bitterness can be aroused by such subjects. Our history from the beginning of the government is filled with controversies about "money." It was in this atmosphere that the Federal Reserve Act was drafted and the System inaugurated.

Further difficulties arose from the existing complication of our banking system. While the National Bank Act prescribed uniform structure, functions, and supervision for national banks, the forty-eight states had separate systems with widely varying characteristics. In general, state banks were of three classes—commercial banks, trust companies, and mutual savings banks; but they had various reserve requirements, conducted a great variety of business, and supervision differed greatly. Since the enactment of the Federal Reserve Act the number of these independent banks of all sorts has varied from 25,000 to 30,000. No change in our currency and banking system would have been accepted which involved any general disturbance to the existing practices and the vested rights of this great number of banks. The new organization had to be superimposed upon an already complicated system, and the execution of each one of the functions of the Reserve Banks involved more or less competition with the member banks which furnished the capital and deposits of the Reserve Banks.

With this rather ominous outlook the Reserve Banks came into being at the beginning of the greatest war in history. No

* Benjamin Strong was Governor and chief executive officer of the Federal Reserve Bank of New York from its opening day in 1914 to his death in 1928. He was a leader in the development of central banking theory and practice in the United States and gave great encouragement to the writing of the first edition of this book.

specific provision could have been made in the Act for such an emergency, as its authors had no thought of even the possibility of so serious a world calamity. It is immensely to their credit that this great piece of legislation, prepared without special regard to the exigencies of war, so nearly met the needs of war finance.

Undoubtedly, what would have been a normal development of the system in time of peace is greatly obscured by the occurrences of the war, which involved the System in operations of such magnitude and of so unusual a character that judgment as to what its normal development will be should even now be suspended. For a time criticism and objection were dormant, the preoccupation of the war having turned men's minds in other directions. But after the war emergency had passed, discussion and criticism of the System, its functions, operations, and policies, became vigorously active.

In view of these circumstances it is not strange that much, if not most, of the public discussion of the Federal Reserve System has been controversial and has centered upon the part played by the System in the so-called "war inflation" and "agricultural deflation," or upon those various instances in which the System appears to have clashed with what were regarded as the vested rights of the country's thousands of independent banks. As the System has gained general public approval, disputes have also arisen as to who may rightfully claim its authorship.

More recently, however, interest in the Reserve System has shifted, and there has grown up a demand for more information as to the significance of its normal daily operations and more explanation of the basal considerations in determining Federal Reserve policies. The controversies over the part played by the System in the war and post-war period are receding into history. Member banks generally have accepted as minor costs of a major improvement such losses as may occasionally result from Federal Reserve competition. The passage early in 1927 of the bill providing for indeterminate charters for the Reserve Banks has marked the passing of the early contro-

versies. In their place there has arisen increasing discussion as to the precise relationships between the Reserve Banks and the money markets and the effects of Federal Reserve action upon credit conditions.

The operating officials of the Reserve Banks, notwithstanding the mass of literature which has already appeared, are constantly being asked for some description of the System's functions and methods which will show its place in the economic life of the country, which will be comprehensive and at the same time sufficiently simple and illuminating as to be truly instructive to the average reader. Dr. Burgess has undertaken to prepare such a book in response to a widespread demand both in this country and abroad. He has scrupulously avoided elaboration of the intricate technicalities of reserve banking and exploration into the unlimited field of theory. But the book is more than a popular treatise; though written in simple language, it constitutes an important contribution to economic science. Dr. Burgess's experience in a responsible office in the Federal Reserve Bank of New York for the past seven years has been of a character which gives him intimate knowledge of the functions and services not only of the Federal Reserve Bank of New York, but of the System as a whole.

He and his coworkers have over a series of years conducted scientific studies of various aspects of Federal Reserve operations, especially of the relation of the System to the money market, which have proved of daily practical value to the operating officers of the New York Reserve Bank. The results of several of these research studies are reported in this book.

Should it appear to the reader that undue weight is given to the relation of the Federal Reserve System to the country's central money market, there are certain facts in that connection which may well be considered. While the Federal Reserve System is truly a regional system, each Reserve Bank being largely autonomous in its domestic operations, it nevertheless is a national system and does not attempt to encourage or enforce banking or financial development in this country

in twelve separate watertight compartments. Such an extreme application of the regional principle would have been injurious to the nation as a whole. So the evolution of the System's affairs has resulted in a very proper and necessary coordination of the operations and policies of the Reserve Banks. Investment and open-market transactions must be conducted harmoniously and, necessarily, the largest volume of these transactions is executed in New York. The same applies to the immense services performed as fiscal agents for the United States Government, and to all the foreign business of the Federal Reserve System.

Many of these most important phases of Federal Reserve operations center about the New York money market, where the financial headquarters of many national industries are located, where money rates are determined, and where most of the contacts with foreign money markets occur. In devoting itself so largely to money-market relationships this volume, therefore, selects for special treatment phases of Federal Reserve operations which are much broader than the operations of the New York bank alone and are central to any understanding of the influence of the Reserve System upon credit and currency in this country.

Probably no business organization has ever been created which has had so rapid and substantial a growth as has the Federal Reserve System, nor has any yet been developed which has so promptly taken its place as a world influence. Its service to our own country and to the world at large, not only in connection with the financing of the war but in facilitating the world's recovery from its devastating effects, will be promoted by a better understanding of its operations and of its purposes. This is the design of the book.

PREFACE TO THIRD EDITION

This third edition is frankly an interim edition. Copies of the second edition are exhausted at a time when the college population is suddenly expanded. It is, however, too soon after events of the war and the postwar conversion to reappraise the Reserve System in a comprehensive revision of this book. As a stop-gap three new chapters have been added. All were written for other purposes and deal with various phases of National monetary policy from the point of view of current interest and participation. It is hoped for that very reason they may have life and meaning perhaps more vivid than the colder summary of the record. They deal with three of the most pressing problems of central banking: monetary management, war finance, and international monetary relations.

In earlier chapters the statistics are now ten years old. The reader may be assured, however, that the principles they illustrate are unchanged. The main structure of the Reserve System and, in fact, that of the country's banking system have not been altered since the Banking Act of 1935, though since that time both have been through some stirring experiences. The principal change has been war-time subordination of Central Banks to Treasuries in all countries. The principal question is how much independence they will regain. We shall know more about that only after the passage of a few years.

W. R. B.

New York, N. Y.
March 1, 1946

CHAPTER I

The Reserve System as a Central Banking System

EVERY civilized country now has some form of central banking institution as an essential part of its financial machinery. The oldest is the State Bank of Sweden which was established in 1668, and the youngest are the Central Bank of the Argentine Republic and the Bank of Canada, which opened for business in 1935. The United States has tried a number of different forms of central banking and now has in the Federal Reserve System a central banking system of a pattern which was new when it was established in 1914 but has since been copied in a number of other countries.

These central banking organizations in different countries are extraordinarily alike. Even though their charters and special forms of organization may differ widely they all perform in general the same sorts of functions. This is so true that an officer of the Federal Reserve System might walk through the doors of the Bank of England, the Bank of France, or the Bank of Japan, and feel himself immediately at home. The business which these foreign institutions are doing is in its broad principles almost identical with the business which the Federal Reserve System does in the United States. In fact, the officer of a central bank is in some respects more at home in the central bank of another country than he is in the commercial banks of his own country. The business is more closely similar, the problems are more nearly the same, the point of view is more nearly identical. Central banking is a totally different sort of activity from commercial banking.

The first outstanding fact about central banks is that they do not operate for a profit but operate in the public service. It is true that many of them do make profits. The stock of the Bank of England or the Reichsbank or the Bank of France

has a market value considerably above par, but the profits are incidental to the main business of the bank, and each one of these banks will frequently take steps in the public interest which sacrifice stockholders' profits. Others of the central banks, including the Reserve System in this country, have legal limitations on payments to stockholders.

A second characteristic of these banks is their peculiar relationship to their governments. Most of them are not government banks, that is, they are not owned by their governments. But all of them have some kind of close relation to their governments. Each government has something to say in the appointment of directors or certain of the executive officers. And all of them serve as bankers for their governments. Yet they all have a considerable measure of independence of the government, and on a number of occasions a central bank has stood out against some governmental policy and secured its modification, though ordinarily a central bank's influence has been exerted through power of persuasion rather than by open opposition.

Central banks have also a curious and unique relationship to the commercial banks of a country, for they are both closely related to the commercial banks and independent of these banks, and in fact have supervisory powers over them. For every single occasion when a central bank may have opposed some governmental policy there may be found in history a dozen occasions when a central bank has acted to restrain commercial banking activities. But central banks also perform a number of types of service for the commercial banks and are appropriately known as bankers' banks. They are bankers both for the government and the commercial banks. In these ways a central bank is different from every other sort of institution.

The officers of central banks are likewise a unique group. They are like government employees in the sense that they may be considered public servants and in the sense that they have no outside commercial interests, but devote themselves wholly to central banking. They are unlike government officials in their freedom from political obligations and in their

greater permanency of tenure. There are few central bankers in any country and the profession suffers from the limited general understanding of its principles and practices.

In all these respects the central banks of different countries are alike despite varying statutes and varying histories. The Federal Reserve System shares these attributes with other central banks.

But more precisely, what are the functions of a central bank? They are of two kinds: chores or semi-mechanical operations, and policy decisions.

Central Banking Chores.—Ninety per cent of the volume of business of central banks is semi-mechanical in nature. The twelve Federal Reserve Banks, for example, employ about 12,000 people. Probably 11,000 of these people are employed on operations involving few important policy decisions. By far the largest proportion of them are engaged in the two operations of handling money and checks. Central banks are wholesalers of money, acting in behalf of their governments. It is through them that the coin and currency which a country uses are put into circulation and retired from circulation. The commercial banks get their supplies of currency and coin from the central banks and return to those institutions surplus or worn currency and coin. The central bank receives from its government, or in some countries from its own press, newly printed money and puts it into circulation. In turn it retires the money when it is worn out.

The volume of currency handled by central banks is enormous. Every year there flows through the Federal Reserve Banks, to be counted and sorted, paid out or retired from circulation, billions of dollars. Thousands of tons of coin are received and counted and paid out. These are important operations, but mechanical in nature.

In many countries the bank check has to a large extent replaced currency and coin in making payments. In these countries the central bank is usually charged with duties in handling checks as well as money. This has been especially true in the United States where the amount of business done by checks has assumed such large proportions. Each year there

are drawn in the United States checks with a total value of from $500,000,000,000 to over $900,000,000,000. About one-third of these checks, most of those not purely local, pass through the Federal Reserve collection system, for the Federal Reserve System with its twelve banks and twenty-five branches provides a convenient clearing house by which checks may be collected between different parts of the country. This collection system has organized and speeded up the whole process of making business settlements. It is a large task but it is again mainly mechanical.

Bankers for the Government.—Most of the payments of the United States Government are made by checks payable at a Federal Reserve Bank, for the Reserve Banks are bankers for the government. The government keeps its working balance in the Reserve Banks. The same function is performed by other central banks for their governments.

A still larger task is the sale and redemption of government securities. When the government sells securities, the circulars describing them are sent out by the central bank. The subscriptions are received by the central bank. Bonds are delivered to the purchasers by the central bank, and when the bonds mature they are paid off at the central bank.

During the war all the Liberty bonds and Treasury certificates were sold through the Federal Reserve Banks, and the selling campaigns were very largely organized by the Reserve Banks. Depression financing has similarly been handled through them. They have also carried through for the government a whole series of special tasks including operations for the stabilization fund, the control of foreign exchange, and dealings in gold and silver.

Central Bank Policy.—The central banking system has duties far more important than the performance of the semi-mechanical tasks just described; it has powers which may at times greatly affect the economic life of a country. These powers arise chiefly from the influence of the bank upon the quantity of money in use. The exact nature of this influence, its effectiveness and its limitations, constitutes one of the most difficult problems in the broad field of theoretical and prac-

tical economics. It is one to which many hours of study have been devoted by many people. It is a favorite field for the theorist and the reformer with a panacea. Certain basic principles and truths are now understood but that is all. Some of these basic principles may be stated dogmatically as follows:

1. The principal money supply of a country like the United States is in the form of bank deposits. By far the largest part of the country's business is paid for with checks drawn on bank deposits.
2. The amount of bank deposits available at any time is much influenced by the amount of bank reserves.
3. Bank reserves are to a considerable extent under the influence of the central bank.
4. Therefore, the central bank, by exerting its powers towards an increase or decrease in the amount of bank reserves available, may influence the country's money supply.

Many chapters could be written about each one of these dogmatic statements, but they may perhaps be clarified by approaching the subject in a different way. It may be said, from one point of view, that there are in any country two kinds of money, and for the sake of giving them names they may be called high-powered money and low-powered money. The central bank deals in high-powered money, the money which constitutes bank reserves. Historically, this high-powered money has been closely related to a country's basic reserves of gold and currency, though the specific form of this relationship shows wide variations under different banking laws.

Low-powered money is the kind of money the commercial bank ordinarily handles—bank deposits and checks drawn on bank deposits.

Now, the most interesting fact about these two kinds of money is their relationship to each other. In any country there is always from five to ten or more times as much low-powered money as there is high-powered money. When the amount of high-powered money increases, the amount of low-powered

money tends to increase also, but in multiple relation to the high-powered money.

The main object of the central bank is to concentrate at one point the control over the country's high-powered money, that is gold, currency, and bank reserves, and thus control the amount from time to time made available as a basis for the multiple creation of bank deposits (low-powered money).

In theory this could be done by paying out a little more gold into the reserves of banks from time to time or by withdrawing it. In practice this crude operation is unnecessary and wasteful. The central bank can make loans to banks or can make investments, and, as it makes these loans and investments, give the banks of the country currency or deposits on the books of the central bank which will serve the commercial banks as reserves against their deposits. A central bank can in this way make a given amount of gold reserves do a larger or smaller volume of business from time to time, thus giving elasticity to the country's credit supply.

The broad principle is that the central bank, having control over the country's high-powered money, may from time to time release for use more of this high-powered money, thus making possible a multiple increase in the amount of low-powered money—bank deposits. Or at other times the central bank may attempt to contract the amount of high-powered money outstanding and bring about some shrinkage in the volume of low-powered money. The process by which high-powered money injected into the banking system as added bank reserves may be expanded into a multiple increase in bank loans and deposits is illustrated in Table 1. The essence of the operation is that, although when any single bank receives an addition to its reserves that bank alone cannot create bank credit in multiple relation to the new reserves, the multiple expansion may take place as the new reserves travel from bank to bank.[1]

The difficulty about this explanation of central banking, aside from its abstractness, is that it makes the whole problem

[1] Chester A. Phillips, *Bank Credit*, The Macmillan Company, 1920, Chapters III, VI.

TABLE 1.—HOW $10,000 OF BANK CREDIT MAY BE BUILT ON $1,000 OF RESERVES

The Federal Reserve Bank buys $1,000 of Government securities from Bank No. 1.
It pays for these by crediting $1,000 on the reserve deposit of Bank No. 1 in the Reserve Bank.

The $1,000 is put to work as follows:

Bank 1 lends	$1,000	to Mr. A	who pays it to Mr. B	who deposits	$1,000	in Bank 2	which sets aside	$100	for reserves and has	$900 left
Bank 2 lends	900	to Mr. C	who pays it to Mr. D	who deposits	900	in Bank 3	which sets aside	90	for reserves and has	810 left
Bank 3 lends	810	to Mr. E	who pays it to Mr. F	who deposits	810	in Bank 4	which sets aside	81	for reserves and has	729 left
Bank 4 lends	729	to Mr. G	who pays it to Mr. H	who deposits	729	in Bank 5	which sets aside	73	for reserves and has	656 left
Bank 5 lends	656	to Mr. I	who pays it to Mr. J	who deposits	656	in Bank 6	which sets aside	66	for reserves and has	590 left
Bank 6 lends	590	to Mr. K	who pays it to Mr. L	who deposits	590	in Bank 7	which sets aside	59	for reserves and has	531 left
Bank 7 lends	531	to Mr. M	who pays it to Mr. N	who deposits	531	in Bank 8	which sets aside	53	for reserves and has	478 left
Bank 8 lends	478	to Mr. O	who pays it to Mr. P	who deposits	478	in Bank 9	which sets aside	48	for reserves and has	430 left
Bank 9 lends	430	to Mr. Q	who pays it to Mr. R	who deposits	430	in Bank 10	which sets aside	43	for reserves and has	387 left
Bank 10 lends	387	to Mr. S	who pays it to Mr. T	who deposits	387	in Bank 11	which sets aside	39	for reserves and has	348 left

And so on, until following totals are reached

Total loans $10,000	Total deposits $10,000	Total reserves $1,000

This table is simplified by assuming:

1. That a deposit balance is not required of borrower.
2. That all deposits made are demand deposits.
3. That all the banks concerned have a 10 per cent reserve requirement on net demand deposits.
4. That all loans and use of funds are identical in character.
5. That all banks receiving Federal Reserve funds are not in debt at the Reserve Bank — otherwise the funds would be used to repay this debt.
6. That these operations do not call for additional amounts of currency.

Actual transactions are more complicated, so that the actual ratio of expansion is subject to great variation. For example, the change in reserve requirements effective August 15, 1936, announced since the table was prepared, will reduce considerably the possible expansion.

appear so simple and automatic. In reality the operation is not simple or automatic. There is, for example, no completely constant relationship between the amount of high-powered and low-powered money. At each step there is a problem in human psychology; so that the methods which are effective at one time may not be at all effective another time, and frequently the central bank may find its powers nullified by other influences. Ordinarily a central bank exerts an influence on low-powered money by small differences in the rate which the bank may charge for lending out its high-powered money. A difference between 3 and 4 per cent may determine directly or indirectly the freedom with which the commercial banks will borrow this money. At other times a central bank, in order to try to bring about an expansion of money, finds it necessary to push its funds into the market by buying government securities and so forcing its high-powered money into use. Even this procedure may not be effective. Expansion is dependent not on the banks alone but on the users of money—their willingness to borrow and their soundness.

In the three years, 1933-1935, for example, the amount of high-powered money made available by the Federal Reserve System and by gold imports has been enormously increased to a point where the banks of the country hold reserves more than twice as large as in 1929. But, at the beginning of 1936, there has been as yet no corresponding expansion in total bank deposits, which though increasing remain smaller than in 1929. Moreover the additional deposits created have not been put to use actively.

All this description of the operation is over-simplified. But the important facts are, first, that a central bank may, under favorable circumstances, affect the amount of money available in a country, and second, that the whole process by which this is accomplished at different times is subject to a thousand influences which make the consequences of an operation impossible to forecast with precision. It is for this reason that the principles of central banking, which are in appearance deceitfully simple, are in reality extraordinarily complex and difficult.

SUMMARY

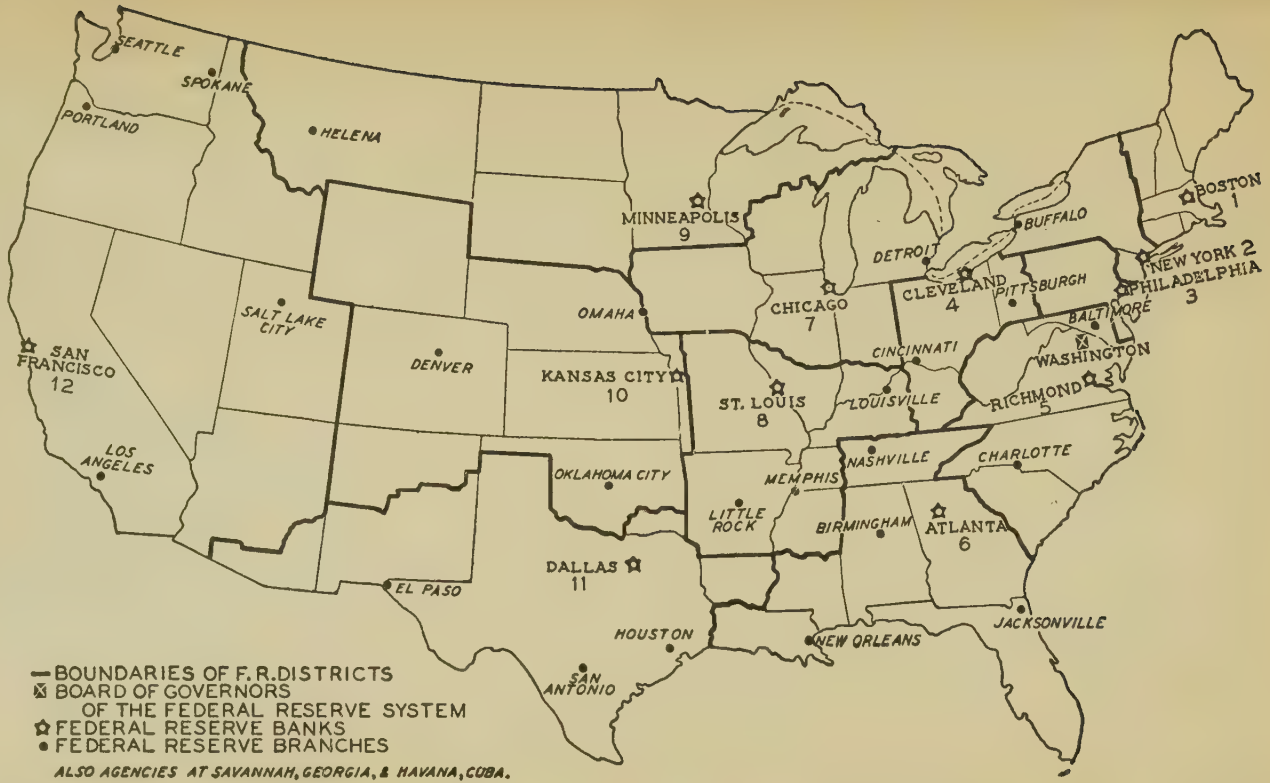
1. Central banks are essential parts of the financial machinery of all civilized countries, and in all parts of the world are extraordinarily alike.
2. Central banks are quite different from commercial banks; they operate in the public service and not for profits.
3. Central banks are bankers for their governments and are related to the governments, but usually have some measure of independence.
4. Central banks are bankers' banks; they serve the banks but also have some supervision over commercial banking.
5. A large part of the staffs of central banks are engaged in semi-mechanical operations such as supplying the currency a country uses and handling check collections.
6. But the major function of central banks is to exert an influence on a country's supply of money.
7. Their influence arises from their control over what may be termed a country's high-powered money—the money which constitutes bank reserves and upon which bank credit is based.
8. A central bank's power to influence money in this way is affected by many varying circumstances. Therefore central banking problems which often seem delightfully simple are in reality seriously complex and difficult.

CHAPTER II

Structure and Growth of the Reserve System

THERE are twelve Reserve Banks in twelve important cities of this country. In addition there are twenty-five branches in other cities, and agencies in Savannah, Georgia, and in Havana, Cuba. In Washington is the Board of Governors of the Federal Reserve System, the governmental body which supervises the operations of the System. The locations of the different offices are shown on the accompanying map.

The Board of Governors.—In the congressional discussions which preceded the passage of the Federal Reserve Act one of the proposals given serious consideration provided for the establishment of a single central bank of issue, rather than twelve Reserve Banks. When the decision for a number of banks rather than one was reached, it was essential to provide a mechanism for coordinating their activities. It would be an impossible situation to have completely independent Reserve Banks in different parts of the country acting upon different policies, maintaining different standards in making loans, and perhaps competing with one another in the purchase of bills or securities. It was essential to have a central coordinating body with adequate powers to weld the separate Reserve Banks into a system. The Board of Governors of the Federal Reserve System is this coordinating body. The Board as reconstructed by the Banking Act of 1935, effective February 1, 1936, consists of seven members, appointed by the President for fourteen-year terms with the advice and consent of the Senate. They receive salaries of $15,000 a year. Under the original legislation the Secretary of the Treasury and the Comptroller of the Currency were ex-officio members but they retired when the new law went into effect. The seven members of the new Board were appointed at first for terms of two, four, six, eight, ten, twelve, and fourteen years in order to



MAP 1—FEDERAL RESERVE OFFICES.

spread the times of reappointments. No member will be eligible for reappointment after having served a full term of fourteen years.

The Board prescribes regulations governing methods and procedure of Federal Reserve operations in those matters where uniformity has appeared to be necessary. Discount rates are fixed by the several Federal Reserve Banks subject to "review and determination of the Board of Governors of the Federal Reserve System . . ." but, under the Banking Act of 1935, "each such bank shall establish such rates every fourteen days, or oftener if deemed necessary by the Board." Open-market policy is determined by an Open Market Committee consisting of the seven members of the Board and five representatives of the Reserve Banks elected by the directors by geographical areas. The Board of Governors has power to change the reserve requirements of member banks under certain conditions and within certain limits and power to prescribe margin requirements on certain types of security loans by brokers and banks.

Under the terms of the Banking Act of 1933 the Board exercises special supervision over all foreign operations of the Federal Reserve Banks. The Board passes upon all applications of banks for membership in the Reserve System, after receiving the recommendation of the several Reserve Banks, and exercises a number of specific and general powers in the supervision of member banks. The Board serves as a central clearing house for inter-district settlements, arising from check collections and wire transfers. It has a force of examiners who examine the Reserve Banks periodically, and it maintains a complete statistical record and analysis of Federal Reserve operations, much of which is made public through the Board's weekly press statements, monthly bulletin, and annual report to the Congress. In addition to these and a number of other specific functions, the Board exercises general supervision over the operations of the Reserve Banks.

Not Government Banks.—The twelve Federal Reserve Banks, although supervised by the Board of Governors in Washington, are not themselves government institutions, nor

yet are they private institutions in the same sense as is the ordinary commercial bank. Their corporate stock is owned wholly by member banks of the districts in which they are located, but under the terms of the law their policies are directed towards the public welfare and not private gain, and the dividends on their stock are limited to 6 per cent. They may well be termed semi-governmental institutions, or even instrumentalities of the government.

The public nature of the Reserve Banks is indicated by the character of their directorates. Three of the nine directors of each bank are appointed by the Board of Governors of the Federal Reserve System and one of these appointees is chairman of the board of directors and one deputy chairman; the other six directors are elected by the banks in the district which are member banks—that is, which are stock owners in the Reserve Bank. Moreover, of the six elective members of the board three must be actively engaged in commerce, agriculture, or industry in the district. On the board of each of the banks business men are in the majority. The stockholders have no other powers with respect to the management of the Reserve Banks. The public character of the Reserve Bank's business is further emphasized by the provision that none of the three appointive members of the board may be an active banker, though the chairman must be a person of "tested banking experience."

The original Reserve Act empowered the directors of each Reserve Bank to appoint officers and employees. Under this power it was the practice for the directors of each bank to appoint a governor as chief executive officer of the bank, though no such officer was mentioned specifically in the law. The Banking Act of 1935 provides for the appointment by the directors, but subject to the approval of the Board of Governors, of a president as chief executive officer of the bank for a term of five years. A first vice president is to be appointed in the same way and for the same term. This provision became effective March 1, 1936. Other officers continue to be appointed by the directors, with Board approval solely as to the salaries to be paid.

Membership in the System.—The members of the Federal Reserve System comprise over 6,400 national and state banks and trust companies—about 42 per cent of all the incorporated banks in the country. This proportion does not hold uniformly in all the states, but varies from about 13 per cent to as high as 82 per cent. In point of deposits, the member banks represent 85 per cent of the commercial banking strength of the country. This general relationship of the number and strength of member banks to all commercial banks in the country is illustrated in Diagram 1.

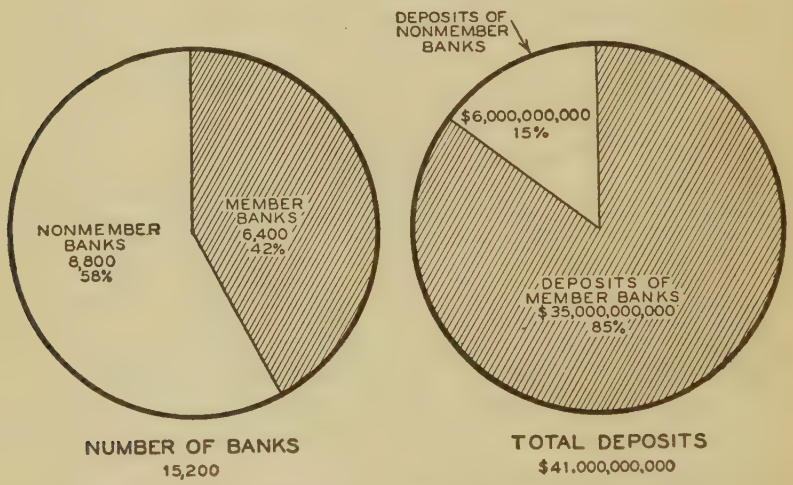


DIAGRAM 1—MEMBER BANKS WERE 42 PER CENT OF ALL COMMERCIAL BANKS IN NUMBER BUT 85 PER CENT IN BANKING POWER ON JUNE 29, 1935. (MUTUAL SAVINGS BANKS AND PRIVATE BANKS EXCLUDED.)

Under the Federal Reserve Act all national banks are members of the Federal Reserve System, and state banks and trust companies may apply for admission under certain eligibility conditions. State institutions may also withdraw from the System. Table 2 shows the number of member banks, both national and state, and their deposits on June 30 of each year since 1915.

The greatest growth in membership was during and following the war period, when banks needed most urgently the help of the Reserve System, and when it became a patriotic duty

to join the Reserve System as a means of strengthening the country's banking structure. The war thus stimulated a rapid growth in state bank membership, which would probably have taken many more years under ordinary circumstances.

TABLE 2.—NUMBER AND DEPOSITS OF MEMBERS OF THE FEDERAL RESERVE SYSTEM

Year (as of June 30)	Number of Banks			Deposits (in millions)		
	National	State	Total	National	State	Total
1915.....	7,598	17	7,615	$ 8,817	$ 77	$ 8,894
1916.....	7,571	34	7,605	10,936	197	11,133
1917.....	7,599	53	7,652	12,792	605	13,397
1918.....	7,699	513	8,212	14,015	4,939	18,954
1919.....	7,779	1,042	8,821	15,936	6,897	22,833
1920.....	8,024	1,374	9,398	17,159	8,242	25,401
1921.....	8,150	1,595	9,745	15,180	8,170	23,350
1922.....	8,244	1,648	9,892	16,323	9,224	25,547
1923.....	8,236	1,620	9,856	16,899	10,189	27,088
1924.....	8,080	1,570	9,650	18,349	11,217	29,566
1925.....	8,066	1,472	9,538	19,911	12,546	32,457
1926.....	7,972	1,403	9,375	20,644	13,118	33,762
1927.....	7,790	1,309	9,099	21,783	13,615	35,398
1928.....	7,685	1,244	8,929	22,650	13,410	36,060
1929.....	7,530	1,177	8,707	21,611	14,282	35,893
1930.....	7,247	1,068	8,315	23,292	14,847	38,139
1931.....	6,800	982	7,782	22,301	13,967	36,268
1932.....	6,145	835	6,980	17,456	10,408	27,864
1933*....	4,897	709	5,606	16,765	9,822	26,587
1934*....	5,417	958	6,375	19,896	11,116	31,012
1935.....	5,425	985	6,410	22,477	12,465	34,942

* Licensed member banks only.

While the state bank membership is not now large in point of numbers, this membership includes most of the sizable state institutions, and deposits of state bank members are more than half as large as those of national bank members.

Since the first edition of this book was published in 1927 there have been great changes in the banking position. The

number of banks in operation in the country has been reduced by more than one-third, from 27,000 to less than 16,000, and the volume of bank deposits from 57 billion to 41 billion dollars. Since the shrinkage was considerably greater among nonmember than among member banks, the number of nonmember banks is today slightly more than half as large as at that time, while the number of members is more than two-thirds as large. This is mainly due to heavier mortality among non-

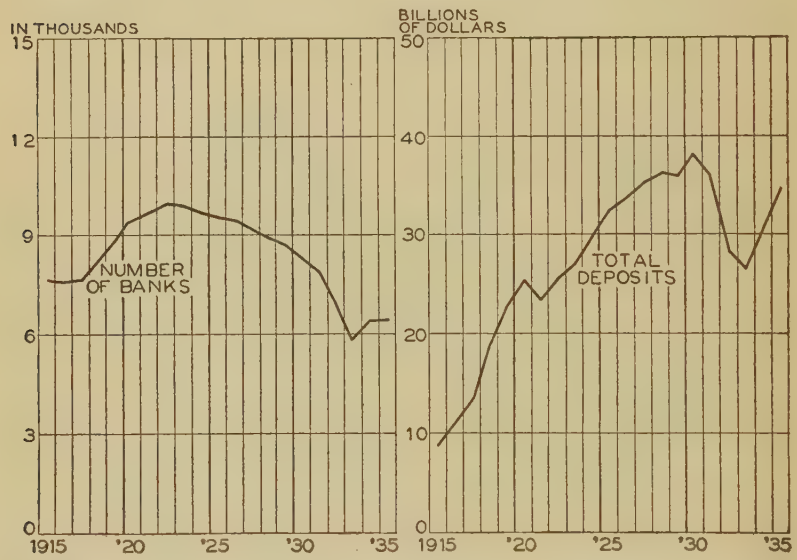


DIAGRAM 2—THE NUMBER OF MEMBER BANKS HAS DECREASED SINCE 1922 DUE LARGELY TO BANK MERGERS AND LIQUIDATIONS; BUT DEPOSITS OF MEMBERS INCREASED RAPIDLY UNTIL THE DEPRESSION. DEPRESSION LOSSES HAVE NOW BEEN LARGELY RESTORED.

members through the depression and banking crises, but a considerable number of nonmembers have also been admitted to membership. As a result of these changes the percentage of member bank deposits to deposits of all incorporated banks has risen from about 70 per cent to 85 per cent.

Under the terms of the Banking Act of 1935 relating to deposit insurance all insured banks with average deposits of $1,000,000 or more are required to be members of the Federal Reserve System after July 1, 1942. When this provision be-

comes effective it will bring into the System all but a very small percentage of the banking resources of the country.

Any mention of the banking mortality of recent years immediately raises questions as to the weaknesses in the banking system which made it vulnerable to the depression, and questions as to the various proposed remedies. Since the aim of this chapter is descriptive, to outline the structural background of the Reserve System, an extended analysis of the commercial banking system would be out of place here and the subject will be discussed in a later chapter. It is perhaps in order here to refer to the introduction to this book written by Governor Benjamin Strong in 1927 in which he called attention to the fact that the Federal Reserve System "had to be superimposed upon an already complicated system." The adoption of the Reserve System was far from being a thoroughgoing reform of the banking system. As will be discussed later, the disasters of 1930 to 1933 reflected in part mistakes in commercial banking legislation and practice of many years' standing.

Membership in Various States.—The variations among the different states in the proportion that deposits of member banks bear to the total deposits of all incorporated banks appear in Diagram 3. The percentages are based upon figures as of June 30, 1934, taken from the report of condition of member banks and the report of the Comptroller of the Currency for all banks.

The variations between states in the proportion of bank deposits which are in banks belonging to the Federal Reserve System reflect to a considerable extent the different banking laws of the various states. Some of them permit such low reserves for state banks that the banks would sacrifice earnings by becoming members of the Federal Reserve System, and there are other difficulties in the state laws which restrain banks from becoming members. Another reason for differences between states is found in the size of banks. In general the states with large cities and large banks tend to show larger percentages of membership.

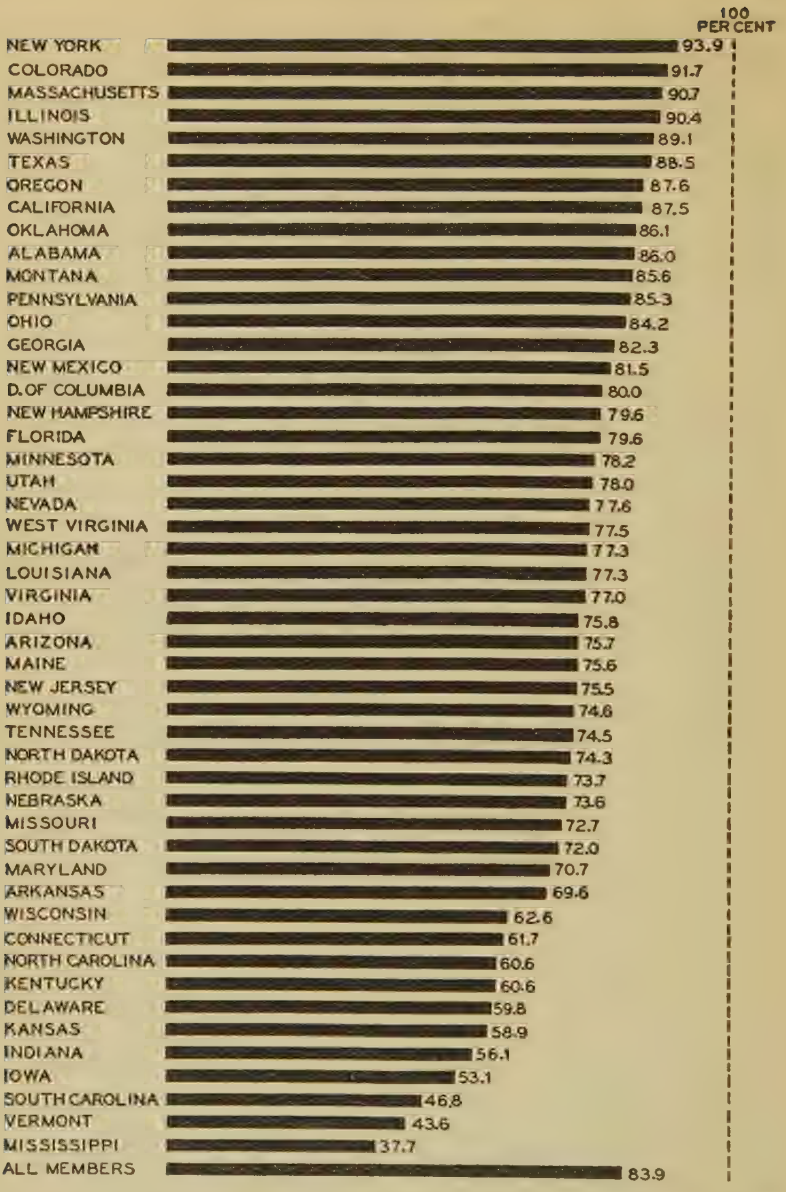


DIAGRAM 3—TOTAL DEPOSITS OF MEMBER BANKS RANGED FROM 94 PER CENT OF ALL COMMERCIAL BANK DEPOSITS IN NEW YORK TO 38 PER CENT IN MISSISSIPPI ON JUNE 30, 1934. (MUTUAL SAVINGS BANKS AND PRIVATE BANKS EXCLUDED.)

What Membership Means.—State institutions applying for membership have ordinarily been required to have at least the minimum paid-up capital required of newly established national banks. For example, the minimum capital required of a national bank established in a rural community is $50,000, and state banks having a capital of less than that were not eligible for membership, except that under an amendment of the Federal Reserve Act, effective March 4, 1923, a state bank might be admitted to membership with a capital of not less than 60 per cent of the amount sufficient to entitle it to become a member bank, provided it should increase its capital stock to the required minimum within five years after its admission to membership. Few banks took advantage of that amendment. In many agricultural states a large number of rural banks having small capital have been ineligible for membership.

In all cases state institutions applying for membership are subject to examination before admission, so that their condition and policies may be ascertained.

A member bank must subscribe for stock in its Federal Reserve Bank in the amount of 6 per cent of its own capital and surplus; thus far the member banks have been called upon to pay in only 50 per cent of the amount of stock subscribed for. As a member bank's capital and surplus increase it must increase its ownership of stock in the Federal Reserve Bank and as they decrease must reduce its stock ownership. The member banks are the sole owners of Reserve Bank stock. This stock is not transferable and so cannot be sold. If a bank liquidates or retires from the System, the shares held by it are canceled, and the bank receives back what it paid in. Dividends are cumulative and have been paid at the rate of 6 per cent annually upon the paid-in capital.

A member bank keeps all of its legal reserves on deposit with its Reserve Bank. These reserves form the principal volume of deposits of the Reserve Banks. Each member is required to maintain such reserves in specified proportion to the amount of its deposits.

To all member banks are available the various services pro-

vided by the Federal Reserve Banks. These include loans to members, the supplying of currency, the collection of checks, the transfer of funds by wire, the custody of securities, and other services. In fact, the Reserve Banks perform for the banks of the country much the same service that the banks themselves perform for their customers. They are in this sense bankers' banks, although they are not designed to serve simply the banking interest, but rather to serve business and the public generally through the member banks.

Size of the System's Operations.—Naturally the operations of the Reserve Banks are much larger in volume than the operations of commercial banks. Their customers are not individuals, but banks, each with its own numerous customers. The money which these customers use, the government securities they buy, many of the checks they draw, and a part of the commercial paper upon which they borrow pass through the Reserve Banks. These banks, therefore, handle money, checks, credit instruments, and securities not in retail but in wholesale volume. In 1935, for example, the twelve Reserve Banks received and counted between 4½ and 5 billion separate pieces of currency and coin with a value of more than 10 billion dollars; they handled for collection more than 885 million checks valued at about 200 billion dollars; they issued, redeemed, or exchanged nearly 7 million United States Treasury bills, notes, or bonds valued at about 31 billion dollars.

In these and other operations the Reserve System is extraordinarily sensitive to changing economic conditions and the Federal Reserve statement from month to month and year to year reflects the country's economic history and especially its growth. Over a long term of years experience has shown that the volume of business in this country has tended apart from periods of depression to increase at a rate of between three and four per cent a year, and banking operations have grown at an even more rapid rate. The business of the Reserve Banks is so closely related to the country's banking operations that in normal times it has grown at a somewhat corresponding rate.

Disposition of Earnings.—The Federal Reserve Banks are organized and operated not for the purpose of making profits,

but, as the title of the Federal Reserve Act states, "to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes." Accordingly, the provisions of the Federal Reserve Act dealing with earnings are so framed as to make the public welfare the sole consideration determining its policy. The Act provides that the member banks shall be entitled to a 6 per cent annual dividend on the paid-in capital stock. Earnings beyond expenses, charge-offs, and dividends are to be paid into a surplus fund, for protection against losses.

Prior to the passage of the Banking Act of 1933 the law provided that excess earnings, beyond the setting aside of surplus equal to subscribed capital, and a further payment of 10 per cent of the excess to surplus, should be paid to the government as a franchise tax. The Banking Act of 1933, however, required the Reserve Banks to pay half their surplus into the capital of the Federal Deposit Insurance Corporation and, by way of compensation, removed the franchise tax provision. It will require, however, the accumulation of many years of earnings at anything like the present rate to bring the surplus back to its amount before the passage of this Act. In 1934, an amendment to the Federal Reserve Act providing for working capital loans to industry included a complicated plan for a restoration to the Reserve Banks by the Treasury of part of their lost surplus as they made industrial loans. Under this plan only small amounts have so far been received. If a Federal Reserve Bank should be liquidated all surplus after payment of all debts and repayment of stockholders would revert to the United States.

The earnings of the banks since their inception have responded directly to their use as seasonal or emergency institutions. The heaviest earnings reflected the large borrowings of the war and post-war years. Under more nearly normal conditions the banks have earned little, if any, beyond their expenses and dividends. At times when earnings were particularly heavy the government received as a franchise tax a large portion of those earnings.

Since the beginning the Reserve Banks have paid $149,000,000 to the Treasury as franchise tax, or 26 per cent of their net earnings. In addition they paid $139,299,000 to the Federal Deposit Insurance Corporation as noted above, and have accumulated a surplus of $146,000,000.

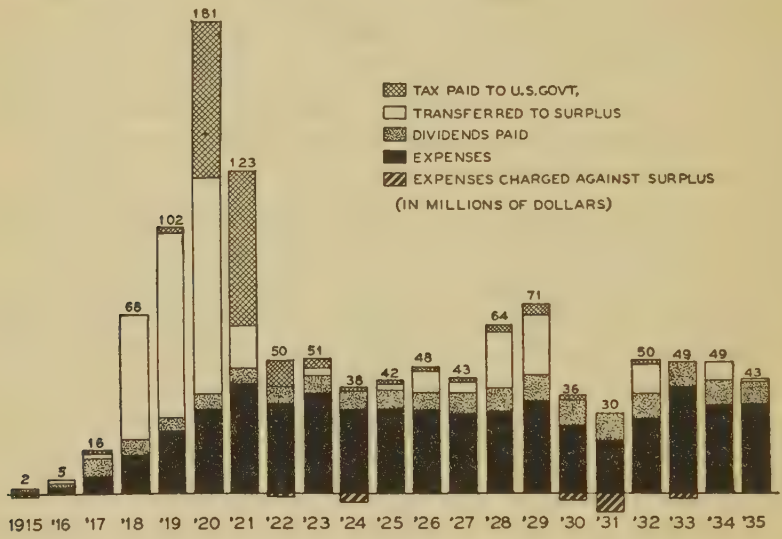


DIAGRAM 4—THE DISPOSITION OF GROSS EARNINGS OF ALL FEDERAL RESERVE BANKS BY YEARS.

The earnings of the System and their disposition since the Reserve Banks began operations are shown in Diagram 4.

SUMMARY

1. The Reserve System consists of the Board of Governors of the Federal Reserve System, twelve Reserve Banks, twenty-five branches, and two agencies, with a total staff of over 12,000 persons.
2. The Board of Governors of the Federal Reserve System is a central supervisory body to coordinate the activities of the System.
3. There are over 6,400 member banks, 42 per cent of the commercial banks in the country with 85 per cent of the deposits.
4. The proportion of the country's total commercial bank de-

posits which is in member banks has increased greatly as a result of the banking developments of recent years.

5. Member banks own all the capital stock of the Reserve Banks, keep their legal reserves with them, and benefit from many services the Reserve Banks provide.
6. The operations of the Reserve System are wholesale in character and reflect the volume and growth of the country's vast banking operations.
7. The law is designed to remove the profit-making motive from Federal Reserve policy, and Federal Reserve policies are determined in the public interest. Dividends are limited to 6 per cent.

CHAPTER III

Bank Reserves and Their Use

FROM the first the banking system in this country has given expression to the American ideal of individuality and freedom. Almost any responsible group of people with a little capital could start a bank, and the result was by 1920 about 30,000 incorporated independent banks as compared with a score or two in most other countries. In the United Kingdom there are thirty-five commercial banks of deposit and in Canada ten; in France the commercial deposit business is largely in the hands of four credit companies in addition to the Bank of France which does a considerable commercial business, and in Germany largely in the hands of five banks, and the Reichsbank, which also deals with the general public.

This concentration of banking in a few institutions has not always existed in these countries but is the result of a process of evolution. They all passed through the stage of independent banking such as still exists in this country. These foreign banking systems now appear to owe much of their strength to the concentration of money power which the political traditions of this country have taught us to abhor.

What may be termed "free banking" in the United States has had its advantages and drawbacks. It has encouraged free lending, and free lending has in turn encouraged enterprise. A new country is probably developed most rapidly when credit is freely available. Some of the new business ventures fail, but many, through the process of trial and error, succeed.

The principal drawback about "free banking" is that it is sometimes not safe banking. This country has had much more than its share of bank failures and they in turn have accentuated business depressions and made them more severe than in most other countries. In periods of rising prices, as from 1896 to 1920, the general increase in values has concealed the weak-

nesses of the system, while encouraging its expansion. But in periods of declining values the unfortunate results have been evident, though they have been blurred by the very human tendency to blame the operators of the machine for weakness in the machine itself.

The laws of this country on bank reserves have constituted one of a number of attempts to strengthen a peculiar banking system by placing around it various restraints and safeguards. In most countries the kind and amount of reserves maintained by banks are matters of prudent banking practice, not of law. But in this country as one means toward ensuring a measure of strength and safety for the thousands of banks it was considered necessary to set up rigid requirements as to the minimum reserve each kind of bank should carry, and enforce them by public inspection.

Defects of Old Scheme.—The consequence of legal reserve requirements was that the gold and currency which represented the underlying banking reserves of the country were scattered about in the vaults of thousands of separate banks. The reserves were also pyramided, made to do double duty, by the practice of counting balances with other banks as legal reserves. While this state of affairs may have conformed with traditions of independence, the results were not satisfactory. The difficulties with bank reserves were analogous to an experience a European city is reported to have had at one time with cabs. The city fathers, as the story goes, were greatly troubled because there were frequently not sufficient cabs available at cab stands. They, therefore, passed an ordinance that each cab stand should have at least one cab waiting all the time. The result of this ordinance was, of course, to accentuate the scarcity. Laws as to bank reserves had a corresponding result. Each bank was required at all times to maintain a legal minimum reserve. This plan was satisfactory and desirable in times when credit was ample, but in periods of stringency it locked up the reserves which in emergencies should have been put to use. A few courageous bankers at such times disregarded the strict letter of the law and paid out their reserves freely to meet unusual needs, but most bankers, obey-

ing the law literally, locked their reserves in their vaults. The law encouraged, and strictly speaking required, that reserves should not be used during such emergencies, and there was no regular method by which they could be released and put to work.

The Federal Reserve System provides a method for putting bank reserves to work in busy seasons and emergencies and retiring them from use when the need has passed. The first step was to remove a part of the reserves from the scattered vaults of individual banks and to centralize them in the Reserve Banks. The second step was to set up a method for using reserves more fully when unusual need arises.

The Insurance Principle.—The shift of required reserves from the vaults of member banks to the vaults of the Federal Reserve Banks was not simply a change in physical location. It made a change in the character and effectiveness of the reserves and enabled them to serve more adequately their original purposes.

A first basic principle which gives greater effectiveness to reserves under the Federal Reserve System is the insurance principle of distributing the risk.

Fire insurance provides one of the simplest illustrations. Every prudent house owner makes some provision against the danger of fire. There are various ways in which he may do it. One way would be to start a special bank deposit which he might call his fire insurance deposit. He would lay aside something in that account each month, so that in case the house were damaged by fire he would have something available towards repairing or rebuilding it. While this is a possible method of insurance, it is an inefficient and expensive one.

What the house owner actually does is to enter a cooperative organization with thousands of other house owners, which is called a fire insurance company. Each one of the house owners pays a small sum regularly to a central fund. There are enough house owners cooperating and enough small sums paid in to make a large reserve fund, which is available to repair or rebuild the houses of any one or several of the cooperating house owners. The insurance principle here is simply that the

risk of loss through fire is distributed over thousands of house owners.

This is somewhat the same principle as the centralization of bank reserves in the Federal Reserve System. Under the old scheme, each bank set aside its own funds against emergencies. The result was that no one bank was able to set aside a sufficient sum to meet its needs in case of a real emergency. But under the Federal Reserve System the reserves of the cooperating banks are pooled and are thus available to meet the emergency of any member or group of members, provided they have not impaired their borrowing power by dishonest or imprudent banking methods.

While the term "insurance" is used here by way of illustration it should be noted that the Reserve System was in no sense a plan of deposit insurance. It was simply a plan for turning a limited and specific kind of a bank's sound assets into cash quickly in times of need. To put it another way the Reserve System was designed to provide liquidity, whereas deposit guaranty plans undertake to guaranty solvency. The question of individual bank solvency was not made a direct responsibility of the Reserve System, but, as far as governmental supervision was concerned, was left largely in the hands of the previously existing supervisory authorities: that is, the Comptroller of the Currency for national banks and the various state banking departments for state banks.

The Principle of Elasticity.—A second basic principle of bank reserves under the Reserve System is the principle of elasticity. There are two kinds of emergencies to be met, one in which a few isolated banks need additional funds, the other in which the demand for funds becomes general. The first need is met through the insurance principle as described above; by the mobilization of reserves they can be shifted to the point where the need is greatest at any time. But when the need becomes general, then the total amount of funds available must actually be increased. The Reserve Banks provide a mechanism by which this can be done—the mechanism of elasticity.

Granted the strength of the pooled reserves and their power

to serve the banks in emergencies, the second part of the problem was to devise a scheme for putting some of the pooled reserves to work and at times to expand the available supply of money without flooding the market with funds and creating inflation.

The principal method was that banks might borrow from the Reserve Banks just as the customer borrows from the commercial bank. In this way the bank in need may secure additional currency or restore depleted reserves. In addition to making such loans the Reserve Banks may put reserve money to work by purchasing government securities, bankers' acceptances (bills), cable transfers, and certain other limited types of securities. The funds used to make these purchases find their way promptly into bank reserves and strengthen the position of the banks. Conversely the sales of these obligations tend to decrease bank reserves just as does the repayment of loans by banks.

Concerning the use of reserve funds just described it is important to note that the reserve funds themselves are not physically withdrawn from the Reserve Banks. In fact under present law and Treasury regulations the gold which constitutes the basic reserves of the Reserve System is held in the Treasury and the Reserve Banks hold only gold certificates or gold credits with the Treasury. The member bank which borrows at a Reserve Bank receives a deposit credit on the books of the Reserve Bank. If the bank needs currency rather than credit it usually draws Federal Reserve notes or other forms of currency. Under present conditions the only case in which the gold reserves of the Reserve Banks may actually be withdrawn is when gold is withdrawn for export to a foreign central bank or is earmarked for such a bank. Ordinarily, borrowing by member banks simply increases the deposits or the note circulation of the Reserve Banks. Since these deposits require only 35 per cent reserves in gold certificates or lawful money and notes only 40 per cent reserves in gold certificates, a Reserve Bank can in an emergency lend to its member banks between two and three times its actual gold reserves, unless

gold is required for export. It is this mechanism which gives the Reserve System its elasticity or power of expansion.

The wise control of the amount of reserve funds that are put to work either through member bank borrowings or Federal Reserve purchases of bills or securities is the most difficult problem the Reserve System faces. It is the primary problem of Federal Reserve policy. The principal instruments of control are the discount rate—that is, the rate of interest the Reserve Banks charge the member banks on loans—direct purchases and sales of bills and securities by the Reserve Banks, and changes in the legal reserve requirements for member banks. The questions involved in the use of these instruments will be discussed in later chapters on Federal Reserve policy.

Economy in Reserves.—While the concentration and elasticity of reserves are the most important changes in bank reserves resulting from the establishment of the Reserve System, there are other interesting changes; and one of these is a reduction in the amount of reserves required by law to be held by banks. The Federal Reserve legislation provided for only a gradual transfer of reserves from the member banks to the Reserve Banks and the amounts required were reduced partly on the assumption that banks would voluntarily keep considerable amounts of reserves beyond the requirements of law.

The changes in the legal reserves against demand deposits of national banks may be summarized in tabular form as follows, for the period from 1887 to the inauguration of the Reserve System, for the first three years of its operation, and under the war-time amendment in 1917, which concentrated all legal reserves but further reduced the amounts.

The reduction in reserve requirements for time deposits, those deposits, consisting largely of savings accounts, on which the bank could require at least thirty days' notice before withdrawal, was still greater. Under the National Bank Act all individual deposits carried the same reserve requirements. In 1914 the reserve against time deposits was reduced to 5 per cent for all member banks, and in 1917 to 3 per cent.

The essential facts about these changes in reserves are

TABLE 3.—RESERVES REQUIRED ON DEMAND DEPOSITS
(Per cent)

	Central Reserve City Banks*	Reserve City Banks†	Country Banks‡
National Bank Act Amended 1887			
Cash in vault (minimum)	25	12.5	6
With approved agents	0	12.5	9
Total	25	25	15
Federal Reserve Act Effective 1914			
Cash in vault (minimum)	6	5	4
With Federal Reserve Banks (minimum)	7	6	5
In vault or with Federal Reserve Banks§	5	4	3
Total	18	15	12
Amendment of 1917			
All in Federal Reserve Banks	13	10	7

* New York and Chicago, at one time St. Louis also.
† Principal cities except New York and Chicago.
‡ All other banks.
§ For thirty-six months from 1914 Reserve city and country banks had the option of carrying these amounts with approved agents.

that the legally required reserves were much reduced and concentrated in the Reserve Banks. Cash in vault or balances with banks are no longer counted as reserves.[1]

From the time of the passage of the Federal Reserve Act until the great depression banks in one way or another reduced steadily the amount of discretionary reserves carried in excess of the legally prescribed minimum. The reduction probably went far beyond the intentions of the framers of

[1] As this book goes to press the Board of Governors of the Federal Reserve System has just announced an increase of 50 per cent in required reserves on both demand and time deposits under terms of the Banking Act of 1935.

either the Federal Reserve Act or the 1917 amendments. The figures for all national banks for the dates of Comptroller's calls are shown in Diagrams 5 and 6.

The aggregate of working reserves, which we may think of as composed of cash in vault, balances due from banks, and balances due from Reserve Banks, was reduced from 34 per cent of total time and demand deposits in 1913 to 20.5 per cent in the typical pre-depression year of 1926. The total of

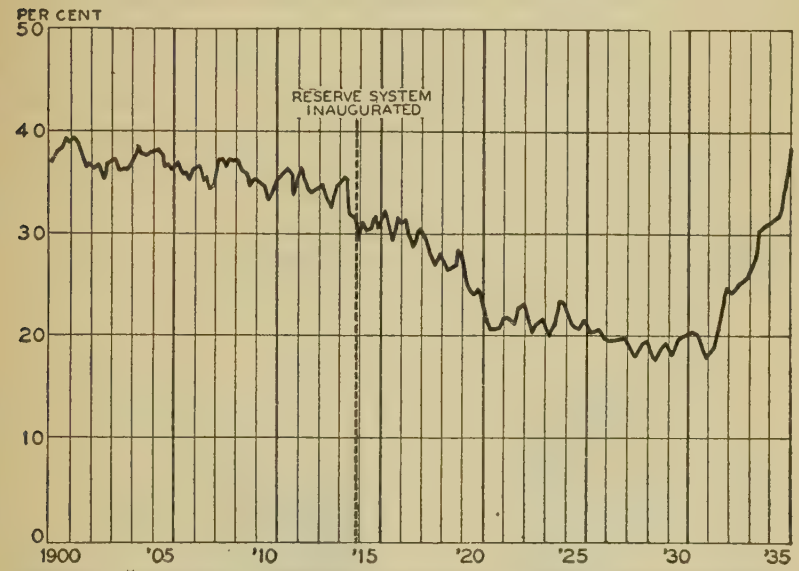


DIAGRAM 5—WORKING RESERVES OF NATIONAL BANKS, IN PERCENTAGE OF TOTAL TIME AND DEMAND DEPOSITS, HAVE BEEN MUCH REDUCED UNDER THE FEDERAL RESERVE SYSTEM UNTIL RECENT YEARS, WHEN THEY INCREASED. (WORKING RESERVES INCLUDE CASH IN VAULT, BALANCES IN BANKS, AND BALANCES IN FEDERAL RESERVE BANKS.)

cash in vault and reserves with Federal Reserve Banks was reduced from 13½ per cent to 9.4 per cent of deposits.

From the point of view of the banks the first important fact about this reduction in reserves is that it released funds for investment or loans, with corresponding benefit to the earnings of member banks. A more important result from a public point of view was the effect of this reduction in bank reserves on the general credit situation. The funds released together with a heavy gold inflow exerted a tremendous pressure for credit

expansion just at the beginning of the World War when many other influences throughout the world were working towards credit expansion and price inflation.

During 1915 and 1916 the member banks carried excess reserves, that is, reserves in excess of the legal requirements, amounting on the average to about $860,000,000 or about 9 per cent of their deposits. This was the only considerable excess of reserves since 1908 and naturally placed the banks in a position where they were eager to make loans and invest-

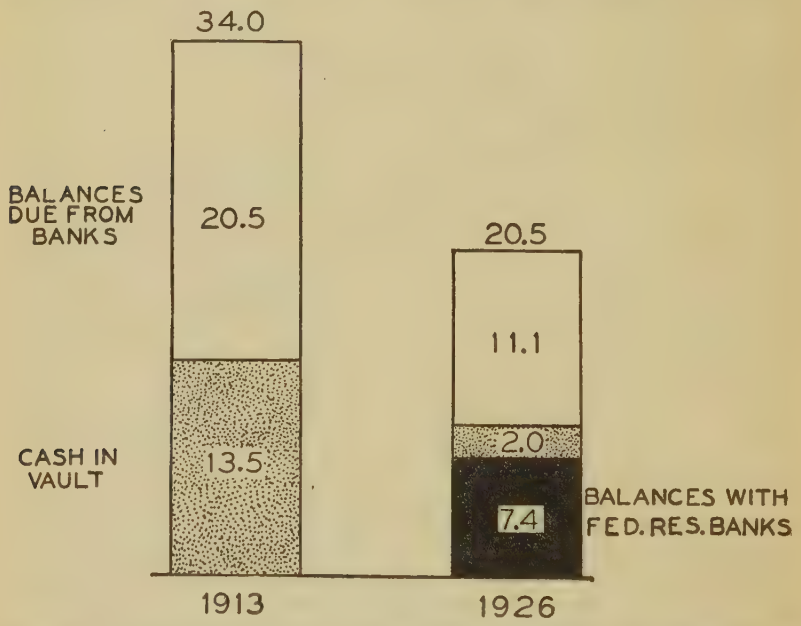


DIAGRAM 6—NATURE OF THE CHANGES SINCE 1913 IN THE WORKING RESERVES OF NATIONAL BANKS. (IN PERCENTAGE OF DEPOSITS.)

ments. The second reduction of reserve requirements in 1917 operated in the same direction.

It should be added that the release of additional credit in this way encouraged foreign borrowing in this market in the early years of the war and made large sums of money readily available when the United States entered the war.

In the post-war period the reduction in required reserves was again an important influence. A major problem at that time was to avoid inflation from the gold which was pouring

into this country—a creditor country for the first time. Under the lower reserve requirements each dollar of imported gold had power to support a larger number of dollars of bank credit and so the problem of control was made more difficult.

The relationships which have been maintained under the Reserve System between the amount of gold in this country and the amount of bank deposits are shown in Table 4. Economy in the use of gold was shown by a drop in the percentage of gold to deposits from 10.3 per cent in 1913 to 7.9 per cent in 1929. If gold imports had been put to full use for credit expansion, the percentage might well have gone considerably lower. The gold revaluation in 1934, plus large gold imports, are reflected in the latest figures which are in the new gold dollars. They evidently leave room for a considerable credit expansion.

TABLE 4.—PERCENTAGE OF MONETARY GOLD IN THE COUNTRY TO TOTAL INDIVIDUAL DEPOSITS

(As of June 30)

1913	10.3%
1920	8.0
1923	9.3
1926	8.8
1929	7.9
1932	9.2
1935	21.9

Reserves in Other Countries.—It is interesting to compare the amount of reserves carried by banks in this country with the amounts currently carried by banks in other countries. It is, of course, difficult to secure figures which are strictly comparable, partly because they are affected by the particular days on which reports are made; but the following table was compiled from the best available data in 1925 and 1926, a reasonably normal period. The reserve figure shown for each country is the percentage of cash, plus balances with banks of issue, to total deposits as nearly as they can be determined. In view of different banking practices in different countries, it is remarkable how nearly uniform are the percentages of reserve carried.

	Typical Reserve
United States member banks	9.5%
Ten London clearing banks	11.5
Four French credit companies	11.5
Swiss private banks	8.0
Chartered banks of Canada	11.0

Growth of Savings Deposits.—Part of the reduction in reserves shown in Diagrams 5 and 6 was due to the establishment of lower reserve requirements for time deposits, which include savings deposits, than for deposits subject to check. Before 1914 there was no legal distinction between the two. In fact there was no mention of time or savings deposits in the national banking laws. Deposits in the banks were generally presumed to be available upon demand, without restrictions of any kind. There was no explicit authority for deposits fitting the technical description given by the original Federal Reserve Act for time deposits: "payable after thirty days." Nevertheless the right to pay interest on deposits was recognized in practice, and many national banks paid attractive rates on certain classes of deposits and thus offered a place for what were really, from the standpoint of the depositor, savings deposits.

For a few years just before the passage of the Federal Reserve Act there had been an increasing interest in such deposits in national banks, and the legal sanction given by the Act provided an impetus to them. Since the new law established a lower rate for time deposits than for demand deposits, it provided a good reason for classifying deposits carefully, and for qualifying interest-bearing deposits, wherever possible, under the technical description of time deposits by making them "payable after thirty days." Many banks also undertook aggressive campaigns to increase their time deposits.

In 1915, with the new reserve requirements in effect, time deposits of national banks (including time certificates of deposit) equaled 20 per cent of total individual deposits. If all certificates of deposit, demand as well as time, are considered as savings, the percentage would have been 26 per cent. In following years, as shown in Table 5, the proportion of time

deposits relative to the total trended definitely upwards, particularly during the twenties, and in 1929 time deposits of

TABLE 5.—PERCENTAGE OF TIME DEPOSITS TO TOTAL INDIVIDUAL DEPOSITS IN NATIONAL AND STATE BANKS*

(Deposits in millions of dollars)

Year (as of June 30)	National Banks			State Banks		
	Time Deposits	Total Individual Deposits	Per Cent Time to Total Deposits	Time Deposits	Total Individual Deposits	Per Cent Time to Total Deposits
1915.....	1,286	6,385	20	3,620	8,569	42
1916.....	1,669	7,769	21	3,906	10,444	37
1917.....	2,091	9,232	23	4,014	8,159	49
1918.....	2,243	9,905	23	4,592	9,774	47
1919.....	2,690	11,771	23	3,988	10,891	37
1920.....	3,402	13,588	25	4,842	11,826	41
1921.....	3,660	12,337	30	6,106	14,380	42
1922.....	4,079	13,197	31	5,841	11,954	49
1923.....	4,711	13,964	34	7,043	13,287	53
1924.....	5,195	14,754	35	7,233	13,942	52
1925.....	5,858	16,254	36	7,871	15,416	51
1926.....	6,243	16,985	37	10,493	19,286	54
1927.....	7,239	18,127	40	10,975	23,863	46
1928.....	8,213	19,217	43	11,539	24,834	46
1929.....	8,147	18,651	44	11,487	25,234	46
1930.....	8,441	19,367	44	11,358	24,520	46
1931.....	8,224	18,329	45	10,481	21,698	48
1932.....	6,771	14,712	46	7,262	15,724	46
1933.....	5,574	13,467	41	5,189	12,551	41
1934.....	6,339	15,605	41	5,599	13,849	40
1935.....	6,894	18,168	38	5,943	16,225	37

* Excluding United States Government deposits, postal savings deposits, due to banks, certified and cashiers' checks outstanding, and unclassified deposits.

national banks were 44 per cent of total individual deposits.[2] There was a decline in time deposits during the depression,

[2] Including all certificates of deposit the percentage would have been 44 also.

along with demand deposits, but they recovered less rapidly, and in 1935 time deposits of national banks were 38 per cent of total individual deposits—about the same proportion as in state banks.

The Comptroller's figures for state banks show no comparable change in the proportion of time to total individual deposits. The percentage is subject to considerable variation, partly due, no doubt, to inconsistency in reporting. But state banks did not experience any such change in the legal com-

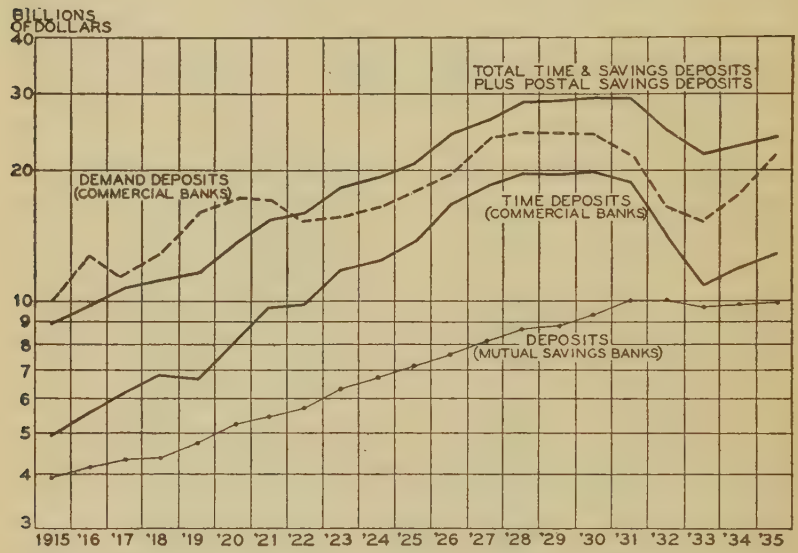


DIAGRAM 7—RELATIVE GROWTH OF TIME DEPOSITS AND DEMAND DEPOSITS IN COMMERCIAL BANKS, DEPOSITS IN MUTUAL SAVINGS BANKS, AND TOTAL TIME AND SAVINGS DEPOSITS INCLUDING POSTAL SAVINGS DEPOSITS. (DATA ARE FOR JUNE 30 EACH YEAR.)

plexion of time deposits as did national banks, and the reduction of reserve requirements on such deposits for state banks joining the Federal Reserve System appeared to be only a minor influence.

Just what the largely increased time deposits of national banks represent is a much debated question. In part they are no doubt deposits previously classified as demand deposits, but do they represent solely this? Do they represent business which would otherwise have gone to the savings banks? Or

are they new savings deposits stimulated by the offering of new convenient savings facilities and by extensive advertising? There is no way at present of definitely answering these questions. Some light is shed on the problem by a comparison of time deposits in all commercial banks with demand deposits in the same banks, and with deposits in mutual savings banks. These comparisons are made in Diagram 7 and Table 6

TABLE 6.—GROWTH OF TIME AND SAVINGS DEPOSITS RELATIVE TO DEMAND DEPOSITS

(In millions of dollars)

Year (as of June 30)	Demand Deposits Commercial Banks*	Time Deposits Commercial Banks*	Deposits Mutual Savings Banks	Postal Savings Deposits	Total Time and Savings Deposits plus Postal Savings Deposits
1915	10,048	4,906	3,946	66	8,918
1916	12,638	5,575	4,136	86	9,797
1917	11,286	6,105	4,341	132	10,578
1918	12,844	6,835	4,344	148	11,327
1919	15,984	6,678	4,724	167	11,569
1920	17,170	8,244	5,172	157	13,573
1921	16,951	9,766	5,396	152	15,314
1922	15,231	9,920	5,687	138	15,745
1923	15,497	11,754	6,283	132	18,169
1924	16,268	12,428	6,686	133	19,247
1925	17,941	13,729	7,140	132	21,001
1926	19,535	16,736	7,559	134	24,429
1927	23,776	18,214	8,055	147	26,416
1928	24,299	19,752	8,666	152	28,570
1929	24,251	19,634	8,891	154	28,679
1930	24,088	19,799	9,191	175	29,165
1931	21,322	18,705	10,017	347	29,069
1932	16,403	14,033	10,022	785	24,840
1933	15,255	10,763	9,700	1,204	21,667
1934	17,516	11,938	9,765	1,221	22,924
1935	21,556	12,837	9,920	1,231	23,988

* Excluding United States Government deposits, postal savings deposits, and due to banks.

which show that time deposits in commercial banks grew more rapidly than their demand deposits, and more rapidly than deposits in mutual savings banks. With the onslaught of the depression, however, they dropped sharply, behaving at that time more like demand deposits than like the deposits in mutual savings banks. Nevertheless this evidence is far from conclusive as to the nature of commercial bank time deposits. Any deposits in commercial banks were bound to be influenced adversely in the depression by the difficulties of those banks, which the savings banks so largely escaped. Savings deposits in commercial banks were doubtless in part withdrawn for hoarding and for deposit with the Postal Savings System, the deposits of which rose from $150,000,000 to $1,200,000,000 during this period.

Evidence of the nature of time deposits of commercial banks is also to be drawn from data on the average amount due each time depositor. Almost 90 per cent of the time deposits of national banks in 1935 were evidenced by savings passbooks, as opposed to time certificates of deposit, and the average account was $397. In state banks, 82 per cent of time deposits were evidenced by savings passbooks, and the average account was $355. The size of these figures in relationship to the mutual savings bank average deposit of $749, suggests that time deposits of commercial banks include a large volume of small accounts, presumably savings accounts.

The rise in the proportion of time deposits of national banks during the first fifteen years of the Federal Reserve System was undoubtedly due in part to changes in the classification of deposits, and some amount of transfers from demand deposits to time deposits of corporation and other funds not needed for immediate use. On the whole, however, it seems a reasonable conclusion that time deposits in national banks, as well as in commercial banks generally, are to a very considerable extent genuine savings deposits, and the passage of the Federal Reserve Act has stimulated the growth of these deposits.

The recent growth of time deposits in member banks raises the further important questions as to whether reserve require-

ments are adequate, and how the growth of time deposits is changing the character of the business of national banks. Funds deposited on time must be employed in higher yielding, and longer term, assets than funds on which no interest is paid. The protection of time depositors is a part of the problem. In case of a run on a commercial bank, the demand deposits might conceivably be withdrawn by check through the clearing house, and the bank's assets exhausted, while the time depositors stood in line at the tellers' windows or were perhaps required to wait thirty or sixty days. The combining of commercial and savings business on a large scale in one institution greatly complicated the problem of the banks during the banking disturbances of 1931 to 1933 which accentuated every weakness. Time deposits proved about as volatile as demand deposits and the slow assets held against them could not be liquidated readily. The effort to liquidate these assets depressed their prices severely and intensified the depression.

The Banking Acts of 1933 and 1935, contain two contributions towards the solution of this problem. First, they have made all bank assets more liquid by giving the Reserve Banks power to lend against any sound asset, Second, they have authorized the Reserve Board to fix maximum interest rates that member banks may pay on time deposits. This latter power places some limitation on the competition between banks for time deposits and relieves some of the pressure upon banks with large time deposits to invest their funds in high yield securities of second grade.

Neither of these two provisions removes the major difficulty which lies in the fact that time deposits under present practices are in effect payable on demand, and yet they have to be employed in long term assets which are subject to fluctuations in value and often cannot be liquidated promptly or without adverse effects. A more basic change is necessary, though at the moment there is no consensus of opinion as to just what should be done.

Power to Change Reserve Requirements.—An amendment to the Federal Reserve Act included first in the Agricultural

Relief Act of 1933 and later amended by the Banking Act of 1935 gave the Board of Governors of the Federal Reserve System power to change the reserve requirements of member banks against time or demand deposits. The Act in its amended form provided, however, that the requirements could not be reduced below the requirements at the time the Act was passed, and they could not be increased to more than twice that amount. This new provision will be discussed in a later chapter as an instrument of Federal Reserve policy.

SUMMARY

1. Before the Federal Reserve System bank reserves were scattered among thousands of individual banks and reserve laws were so inflexible that reserves could not be used in emergencies.
2. The Reserve System made two great changes in reserves:
   A. It concentrated the reserves and made them mobile and usable.
   B. It provided a plan for increasing at times the power of reserves to support credit.
3. Concentration and greater efficiency of reserves have been accompanied and followed by a large reduction in the amount each member bank is required to maintain.
4. Lower reserve requirements on time or savings deposits have been followed by large increases in these deposits in national banks, with a consequent change in the character of the business of these banks involving a number of perplexing problems.

CHAPTER IV

The Reserve Banks as Lenders

AS WAS noted in the previous chapter, the method by which the basic reserves concentrated in the Reserve Banks are put to additional use from time to time is the making of loans and investments by the Reserve Bank. It is by variations in the amount of its loans and investments that any central bank provides elasticity of credit for the country. The general principle is the same in all countries, but the particular forms in which central bank credit is extended differ widely. The Federal Reserve Banks have under the law extended credit in three principal forms:

1. Loans to member banks.
2. Purchases of acceptances.
3. Purchases of government securities.

The amounts of these different forms of credit outstanding at different times have shown great variation as is illustrated in Diagram 8. During the war period loans were greatly expanded, and their volume was substantial through most of the subsequent history of the System until the past few years, when money has been so plentiful that the banks have been able to pay off practically all of their borrowings from the Reserve System. Since 1933 Federal Reserve credit has taken the form almost exclusively of purchases of government securities. In the whole 21 years acceptances have provided perhaps the most rapidly fluctuating form of Reserve Bank credit and in particular have shown marked seasonal movements. Apart from these three main types the other forms of Federal Reserve lending have been of relatively small importance.

The history of the changes from time to time in the character and amount of Federal Reserve credit constitutes the history of Federal Reserve policy and much of this book will

be concerned with the analysis of these fluctuations and their causes. The purpose of this chapter is to lay the groundwork for later discussions by a description of the general nature of Federal Reserve credit and particularly of loans.

Who Takes the Initiative?—At the outset one interesting distinction may be drawn among the three principal types of loans and investments. In acquiring government securities the

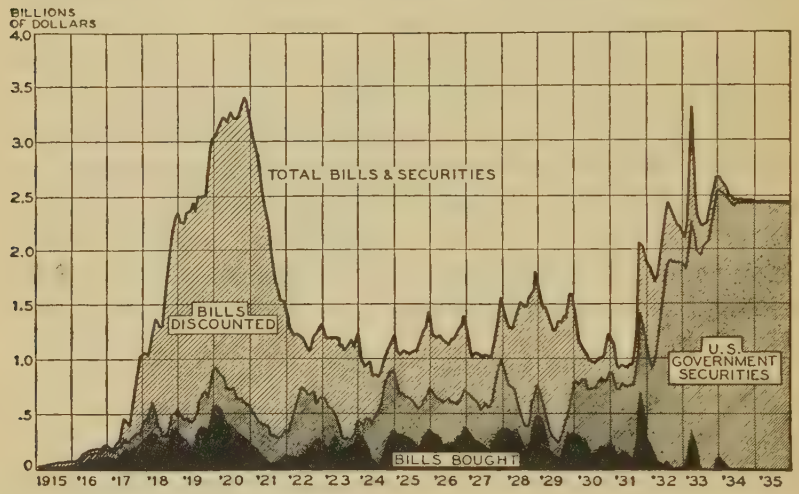


DIAGRAM 8—VARIATIONS OF PRINCIPAL FORMS OF RESERVE BANK CREDIT IN USE.

Federal Reserve Banks are active in the sense that purchases are the result of definite policy decisions. The Reserve System decides in advance when and how much government securities it will purchase. There is one minor exception to this statement in the case of securities acquired under repurchase agreement, which will be discussed in a later chapter, but the amounts involved are small. Generally speaking, in government security operations the Reserve System takes the initiative.

In making loans to member banks, however, and in purchasing acceptances, the Reserve Banks are to a certain extent passive. That is, they stand ready to make loans to their member banks within the limits of the amount of suitable paper which the banks may have available to discount or pledge.

Again there are some exceptions to this general statement; there have been times when a Reserve Bank has refused to lend or to increase its loans to some member bank no matter how good the paper offered. But, the point at which the Reserve System has ordinarily expressed its policy in its lending operations has been not in granting or refusing loans but in determining the interest rate, or discount rate, at which loans are made. Similarly the Reserve Banks ordinarily stand ready to buy the eligible bankers' acceptances which may be offered to them. There have indeed been times when eligible acceptances have been refused; but generally speaking the Reserve Banks have been passive rather than active in their specific purchases of acceptances and have expressed their policy by changes in the rates at which purchases are made.

These statements should not be interpreted to mean that the Reserve System has no control over the volume of its loans or acceptance holdings, but rather that the control is of a quite different sort from the control over government security holdings. The peculiarities of the acceptance market and its relation to the Federal Reserve Banks will be discussed in a later chapter on the bill market, and the government security holdings will be discussed under open-market operations, while the rest of this chapter will discuss particularly loans to member banks.

Loans to Member Banks.—Loans to banks take two forms, discounts and advances. A discount (or rediscount) is made when a member bank endorses and sends to the Reserve Bank its customers' promissory notes, the proceeds of which are used for agricultural, industrial, or commercial purposes. The Reserve Banks may discount paper of this sort with a maturity of not more than ninety days, or in the case of certain kinds of agricultural paper, nine months. An advance is made when a member bank gives a Federal Reserve Bank its own promissory note payable within ninety days and secured by its customers' obligations of the same sort as are eligible for rediscount or payable within fifteen days if secured by United States Government bonds, notes, or bills or obligations fully guaranteed by the government. In addition to these usual forms

of loans to member banks the depression gave rise in 1932 to a broader form of advance on any sound collateral. This form has been made permanent by the Banking Act of 1935. The Reserve Banks were also given in the summer of 1932 and again in 1934 certain limited powers to make loans directly to

TABLE 7.—LOANS TO MEMBER BANKS MADE BY THE FEDERAL RESERVE SYSTEM—AVERAGE END OF MONTH HOLDINGS BY YEARS, 1914–1935

(In millions of dollars)

Year	Rediscounts Secured and Unsecured	Advances			Total Discounts and Advances
		Secured by U. S. Government Obligations	Otherwise Secured	Total	
1914*....	10				10
1915*....	32				32
1916*....	30				30
1917†....	438		222	222	660
1918*....	645	1,094	21	1,115	1,760
1919*....	1,087	1,119	9	1,128	2,215
1920.....	1,531	1,020	6	1,026	2,557
1921.....	1,161	574	15	589	1,750
1922.....	330	223	12	235	565
1923.....	372	387	8	395	767
1924.....	205	156	11	167	372
1925.....	168	273	70	343	511
1926.....	196	319	86	405	601
1927.....	127	270	60	330	457
1928.....	194	576	127	703	897
1929.....	270	535	166	701	971
1930.....	113	118	43	161	274
1931.....	128	149	58	207	335
1932.....	166	215	123	338	504
1933.....	65	79	104	183	248
1934.....	5	9	18	27	32
1935.....	1	3	3	6	7

* Holdings as of December 31.

† Holdings December 31, 1917 included rediscounts for Federal Reserve Banks.

individuals and business concerns. The loans under these recent provisions of law have been relatively limited in amount and by far the largest business has been under substantially the terms of the original Federal Reserve Act, as modified in 1916 to make government securities eligible as collateral for advances.

An analysis by principal types of the loans to member banks made by the Federal Reserve System is shown in Table 7.

Another indication of the scope of the System's lending operations may be found in the number of banks accommodated at different times. This is shown in Table 8.

TABLE 8.—NUMBER OF MEMBER BANKS ACCOMMODATED THROUGH DISCOUNTS AND ADVANCES—HIGH MONTH, LOW MONTH,* AND AVERAGE

Year	High Month	Low Month	Average
1915	835	398	680
1916	678	314	512
1917	1,701	262	840
1918	3,671	1,353	2,786
1919	4,047	3,091	3,829
1920	5,551	3,338	4,534
1921	5,745	5,107	5,502
1922	5,350	3,793	4,366
1923	4,110	2,976	3,654
1924	3,795	2,573	3,265
1925	3,289	2,415	2,902
1926	3,458	2,659	3,023
1927	2,858	2,345	2,593
1928	2,957	2,104	2,615
1929	3,414	2,597	3,043
1930	3,049	2,194	2,679
1931	3,375	2,185	2,625
1932	3,640	2,884	3,295
1933	3,285	1,033	1,787
1934	929	202	420
1935	213	119	172

* Each bank is counted only once no matter how often it borrowed during the month. The averages are computed from twelve monthly totals for each year

The number of member banks during these years increased from 7,584 in November, 1914, up to 9,892 in 1922 and then declined to 6,410 in 1935. The percentage of banks borrowing ranged on the average from about 7 per cent to 56 per cent, and during most of the time it might be said that about one-third of the banks were borrowing. This does not mean that some banks were borrowing continuously, for the borrowing shifted from bank to bank.

Eligibility of Paper for Discount.—The theory back of the rules of eligibility in the original Federal Reserve Act was that the central bank of a country should take into its portfolio only the highest grade "self-liquidating" paper of short term. This paper should be so directly related to the turnover of business that the funds to pay off any loan would be provided automatically by the completion of the business transaction represented by the paper. In this way it was believed the funds of the central bank would only be put into use at times when they were required by business, and they would flow back into the central bank as soon as the need had passed. Practical difficulties in a rigid application of this theory to the lending operations of the Federal Reserve Banks arose first in 1916 when the greater convenience of advances against government securities led to an amendment to the Federal Reserve Act (September 7, 1916) authorizing such advances. During the war these powers were used extensively. Later the amount of strictly eligible paper available in the country, even including government securities dwindled to a point where it was insufficient to take care of all bank requirements in the great depression. It was also gradually discovered that the eligibility provisions of the Act did not serve to regulate the amount of Federal Reserve credit outstanding as well as theoretical considerations had suggested.

Before plunging into these questions it may be well to review a little more specifically the standards of eligibility of paper for discount at a Federal Reserve Bank prior to the legislation of recent years. It is difficult to do better than to quote from a summary published in the Federal Reserve Bulletin for July, 1930.

Tests of Eligibility.—In view of the fact that the Federal reserve system was established for the purpose, among others, of creating an agency from which member banks can obtain credit for seasonal or emergency needs, the Federal reserve act provides in a general way that so-called commercial paper be eligible for discount with the reserve banks. This is a class of paper that a typical member bank would acquire in considerable volume in the course of its ordinary operations, and at the same time one that is so liquid that it can be safely held by the banks of issue. Paper created in the process of financing the flow of commodities in production and trade arises out of loans that are ordinarily liquidated by the borrower with funds received in the natural course of events from the sale of goods underlying the transaction. In the majority of cases the rules and regulations relating to eligibility are consequently devoted to defining eligible paper by reference to the nature of the underlying transactions. The first question to ask, therefore, in the process of testing any piece of paper for eligibility, is: Did it arise from, or are the proceeds to be used for, the proper sort of transaction? Other questions, which are equally essential but comparatively easy to determine, are as follows: Is the maturity within the law and regulations? Does the paper meet the physical formalities prescribed? Has the legal limit of the aggregate of paper rediscountable for the particular obligor been reached?

In order to be eligible, paper must arise out of a transaction related to an agricultural, industrial, or commercial purpose; the paper must have been drawn or the proceeds used for producing, purchasing, carrying, or marketing goods. Paper is not eligible if the proceeds are used to finance fixed investments of any kind; or any investments of a purely speculative character; or carrying or trading in stocks and bonds except obligations of the United States; or to finance relending operations except relending by cooperative marketing associations and factors.

Because of the longer maturities for which agricultural paper may be rediscounted, it needs to be distinguished from other eligible paper. Agricultural paper arises out of activities of growers in connection with production, marketing, and carrying of agricultural products, including the breeding, raising, fattening, or marketing of livestock. In classifying paper, the purpose of original negotiation is determining throughout its life.

Some special points should be kept in mind with relation to bankers' acceptances. In respect to this type of paper the law and regulations are somewhat more specific as to the purpose of negotiation or nature of transaction. Purposes specifically enumerated are shipment of goods, including export and import, storage of readily marketable staples, and the creation of dollar exchange.

Eligibility vs. Acceptability.—The Federal reserve act, the regulations of the Federal Reserve Board, and the rulings of the board define the tests that paper must meet in order to be eligible for rediscount. The Federal Reserve banks must observe these tests when taking paper, but to them is left the matter of passing on the desirability of paper from a credit standpoint. Paper may meet the technical tests of eligibility and yet fail to meet the credit requirements of any particular Federal reserve bank. Moreover, each Federal reserve bank is charged by the act in extending accommodation to any particular member bank to have "due regard for the claims and demands of other member banks."

Member Bank Collateral Notes.—Member banks, in addition to raising funds from Federal reserve banks by rediscounting, may borrow for 15 days[1] on their own notes secured by obligations of the United States or by paper eligible for rediscount. Indeed, more use has been made in recent years of this method of borrowing than of rediscounting; . . .

Decline in Amount of Eligible Paper.—While every bank doing a commercial banking business has a considerable amount of eligible paper as described above, every bank also has a considerable amount of paper which is not eligible because of its longer maturity or the nature of the transaction

Table 9.—Eligible Paper and U. S. Government Securities Held by All Member Banks

(Dollar amounts in millions)

Years	Total Loans and Investments	Eligible Paper	Per Cent of Eligible Paper to Total Loans and Investments	Government Securities*
Dec. 27, 1916	$10,609	$2,300	21.7	$ 24
June 30, 1920	24,871	6,100	24.5	2,123
June 30, 1925	28,869	4,800	16.6	3,132
June 30, 1930	35,006	3,905	11.2	3,412
June 29, 1935	28,563	2,050	7.2	11,208

* Less estimated amount of United States Government securities pledged to secure national bank note circulation.

[1] The time has been lengthened to 90 days for notes secured by eligible paper.

financed. In fact, the amounts and proportions of eligible paper held by the member banks of the country have diminished markedly in the past fifteen years. The preceding figures, which are of necessity partly estimated, show the changes which have taken place.

There are a number of reasons for this gradual decrease in the amount of eligible paper. The first and most important reason is that the decade of the twenties was one in which business concerns found it easy and advantageous to obtain funds through the sale of securities, which they might use in repaying bank loans and in building up a supply of working capital. The experience of 1920 and 1921, when a large volume of bank loans was liquidated under some pressure and at some sacrifice, influenced many business men to place their finances in a more independent position.

A second cause back of the reduction in eligible paper was the reduction in inventories and speeding up of business turnover, accompanying the movement towards business efficiency of that decade, which is revealed by many surveys.[2]

A third cause operating in the years of the depression was the great decline both in the volume of business and in production costs.

The figures in Table 9 are totals for all member banks. This eligible paper was not, of course, distributed evenly among member banks, but some banks held more than ample amounts and others small amounts. As a consequence when the banks were subjected to heavy withdrawals in the great depression many banks found themselves without sufficient eligible paper to obtain from the Reserve Banks all the funds they required to meet their customers' needs.

The theory of limiting central bank loans to eligible paper was based on the assumption that the greatest needs for credit would arise at times when business was most active and hence when the banks held the largest amount of eligible paper. While this theory is frequently valid, and in the 21 years of

[2] See especially, Report of the Committee on *Recent Economic Changes in the United States*, of the President's Conference on Unemployment, National Bureau of Economic Research, vols. 1 and II, 1929.

the history of the System most of the large demands upon the Reserve Banks have resulted rather directly from business activity, the war and the great depression demonstrated different kinds of requirements. The government's huge financial demands during the war made it necessary (using the 1916 amendment) to give the banks every inducement to buy or lend on government securities. In the great depression the heaviest demands upon member banks came at a time when business was greatly depressed and the amount of eligible paper held by the banks was at its lowest ebb. Hence came the necessity for amending the Federal Reserve Act to permit advances by the Reserve Banks to member banks on an increasingly wide range of collateral.

Loans on Other Assets.—Early in 1931 the governors of the Federal Reserve Banks recommended a revision of the law, but it was not until February, 1932, that the recognition of the need became sufficiently general to support legislation on the subject. The result then was the passage of the so-called Glass-Steagall Act, later amended by the Emergency Banking Act of 1933, the pertinent paragraph of which follows. A further provision, permanent in nature, enabling groups of banks to borrow, endorsing each other's paper, has not proved practical.

> Sec. 10 (b). In exceptional and exigent circumstances, and when any member bank has no further eligible and acceptable assets available to enable it to obtain adequate credit accommodations through rediscounting at the Federal Reserve bank or any other method provided by this Act other than that provided by section 10(a), any Federal Reserve bank, under rules and regulations prescribed by the Federal Reserve Board, may make advances to such member bank on its time or demand notes secured to the satisfaction of such Federal Reserve bank. Each such note shall bear interest at a rate not less than 1 per centum per annum higher than the highest discount rate in effect at such Federal reserve bank on the date of such note. No advance shall be made under this section after March 3, 1934, or after the expiration of such additional period not exceeding one year as the President may prescribe.

This provision was extended by the President for a year from March 3, 1934, to March 3, 1935, and after a few months'

lapse has been made permanent by a paragraph in the Banking Act of 1935, but in liberalized form as follows:

Sec. 10 (b). Any Federal Reserve bank, under rules and regulations prescribed by the Board of Governors of the Federal Reserve System, may make advances to any member bank on its time or demand notes having maturities of not more than four months and which are secured to the satisfaction of such Federal Reserve bank. Each such note shall bear interest at a rate not less than one-half of 1 per centum per annum higher than the highest discount rate in effect at such Federal Reserve bank on the date of such note.[3]

The volume of loans made under the temporary feature of the Glass-Steagall Act is shown in Table 10.

TABLE 10.—FEDERAL RESERVE LOANS TO MEMBER BANKS UNDER GLASS-STEAGALL ACT OF FEBRUARY, 1932

(In thousands of dollars)

	1932	1933	1934	1935
January	—	14,217	16,099	1,425
February	—	18,530	14,038	1,740
March	46	66,157	12,285	1,559
April	3,900	94,725	9,736	1,525
May	4,560	73,261	8,232	1,494
June	19,219	24,439	6,570	1,475
July	21,510	26,962	6,197	1,473
August	15,784	20,652	6,347	1,458
September	15,135	19,611	2,368	1,453
October	14,415	19,455	2,114	1,452
November	14,123	20,513	1,731	1,532
December	13,974	18,824	1,647	1,594

The amounts of these loans were relatively small but that is not a trustworthy indication of the importance of the law. The cases in which these loans were made were borderline and critical cases. Moreover the assurance to all member banks that they could, if necessary, obtain the credit they required

[3] This has been interpreted to mean the highest discount rate applicable to discounts for member banks under the provisions of sections 13 and 13(a). For a discussion of this point see the Federal Reserve Bulletin for November, 1935, page 771—"Advances under section 10(b) of the Federal Reserve Act."

at the Reserve Banks against any of their sound assets helped give them reassurance and courage at a time when it was greatly needed and placed them in position to lend more freely on ineligible paper. The latter consideration was emphasized by Governor Eccles in advocating the provision included in the Banking Act of 1935.[4] It should be noted also that beginning early in 1932 the Reconstruction Finance Corporation was created to make loans to banks and other financial agencies and carried a major part of the load of ineligible loans.

The passage of the amendments to the Reserve Act just described brings the law in this country nearer to the practice of other countries; heretofore eligibility provisions had been in general more restrictive than elsewhere.

Value of Eligibility Rules.—The experience of recent years has led to considerable questioning of the theoretical as well as the practical value of the eligibility standards of the Federal Reserve Act. The change in point of view indicated by the willingness in 1932 to pass temporary legislation for loans on ineligible paper and, in 1935, to make this provision permanent in still more liberal form, did not take place easily. When the proposal was first suggested in the Senate there was bitter editorial and Congressional opposition. It was contrary to principles of central banking widely taught and firmly held. The arguments are worth reviewing briefly as a necessary basis for understanding policy questions considered later.

The eligibility provisions of the Federal Reserve Act might be expected to prove valuable and effective in three directions; first, in assuring the liquidity of the Federal Reserve Banks, second, in setting standards for member bank loans, and third, in controlling the volume of Federal Reserve loans.

First, as to the liquidity of the Federal Reserve Banks, it is necessary that their portfolios should be so liquid that their loans will be paid off promptly when the need for the loans passes. Ordinarily, experience has shown, the Reserve Banks look to the banks for repayment. If the member banks are solvent they will in natural course pay off Federal Reserve

[4] U. S. House of Representatives, Committee on Banking and Currency—*Banking Act of 1935*; Hearings . . . Statement of Marriner S. Eccles, before 74th Congress, 1st Sess. on H.R. 5357, March, 1935, p. 183.

loans at the earliest possible moment. Frequently they pay off loans long before the particular paper used matures. The quality of the paper offered by a member bank for rediscount or as collateral for a loan becomes important as far as promptness of payment is concerned only in the case of failed banks. Under these circumstances the eligible paper received from a member bank is often less desirable than some other asset which the member bank may hold, particularly its bonds, for bonds can be sold promptly in the market whereas eligible commercial paper, even of the best quality, can only be collected over a period of weeks or months. Thus the Reserve Banks may well be in a safer and more liquid position in making loans to member banks if the paper they take is not restricted by technical eligibility requirements.

As to the second point, the standards of eligibility set up by the Federal Reserve Act have been valuable in improving the quality of the paper in member bank portfolios. Each member bank naturally desires to have as large a proportion as possible of its loans in eligible form. This has led banks to seek out liquid and sound loans and to put them in eligible form by requiring adequate statements from the borrowers. The careful review which the Reserve Banks have made of all paper presented to them and the resulting conferences with the officers of member banks have been an influence for the improvement of banking practices. It is also true, conversely, that the eligibility requirements of the System have made it at times more difficult for borrowers whose paper might be good but technically ineligible to obtain funds from member banks. But, on the whole, it is fair to say that the eligibility requirements of the Reserve System have exerted an influence toward the betterment of banking standards in the United States.

We come then to the third traditional reason for the original eligibility requirements; namely, that their enforcement would aid in a suitable control of the volume of credit. The theory in its pure form was that as long as the Reserve Banks accepted only business paper arising out of bona fide commercial transactions there could be no excessive expansion of

credit, because credit would always be related to the needs of business. This general theory and its corollaries have been the source of many a dispute in Federal Reserve policy. The question has been raised, for example, on a number of occasions, whether the power of the Reserve Banks to make advances to member banks collateraled by government securities was not in some way responsible for the "seepage" of Federal Reserve funds into speculative channels.

As a basis for any discussion of this whole problem it is desirable to visualize the mechanism of the relation between the paper which a member bank offers the Reserve Bank and the causes of the borrowing; for in practice the particular piece of paper which a member bank presents to a Reserve Bank is usually unrelated to the cause of borrowing. The following points may be noted.

1. Banks usually borrow because their reserves have become impaired; that is, they borrow after the event which makes it necessary. Only rarely do they borrow specifically to lend again.
2. The immediate cause of borrowing is often outside the bank's control, as when the bank's reserves are depleted by a withdrawal of deposits by some or many customers, by check, or any form of currency. Such a withdrawal of deposits may be due to business operations of which the bank may be wholly ignorant. It may even be due to gold exports or sales of securities by the Reserve Banks, though of course the need to borrow is influenced by the member bank's general lending and investing policy.
3. Any bank with deficient reserves has several alternatives. It may call loans. It may sell acceptances or other investments. It may borrow from a correspondent bank, or it may borrow from a Federal Reserve Bank. If the bank decides to borrow from a Reserve Bank it has the choice whether it will present some of its customers' paper for rediscount or borrow from the Reserve Bank on its own secured note. A secured note is usually more convenient because many member

banks hold in safekeeping with their Reserve Banks government securities available for their use. This avoids the work of picking out customers' paper, listing it on application blanks, making sure the Reserve Bank has statements properly filed, arranging appropriate maturities, etc.

4. The difficulty of exercising control over the use of Federal Reserve credit by restriction of the character of paper the member banks may offer to the Reserve Bank, that is by eligibility rules, is further indicated if we carry the process one step further. For when a member bank borrows from the Reserve System it is at times taking only the first in a series of steps by which one dollar of Federal Reserve credit may expand into a number of dollars of bank credit. This principle was discussed at some length in Chapter I. It is perhaps the most difficult and perplexing of banking questions, but it may be restated briefly that when an extra dollar of Federal Reserve credit is put into use through the borrowing of member banks or through investments on the part of the Federal Reserve Banks, ten or more dollars of member bank loans and deposits may eventually be built up as the money passes about from one hand to another. So that the operation of making the loan to the first bank is only the first step in a chain of operations, and it would be of little value to attempt to exercise rigid control over the first use of the money when the succeeding use through other banks is not subject to control. The important point to be observed is that the borrowing bank has little influence over the ultimate use of the Reserve credit it may borrow. It is simply an instrument and in many cases a passive one by which Federal Reserve credit first gets into use. The nature of the use may be largely determined by others.

It may also be noted that the amount of eligible paper held by the banks is not an adequate check on their borrowing, for, even though some individual banks might not have ade-

quate amounts, the amount of borrowing has practically at all times been considerably less than the total volume of available eligible paper. For example, in 1929, at the peak of the speculative boom, the average holdings of government securities and eligible paper by New York City banks as indicated by the four condition statements of that year were as follows:

Government securities owned.....	$1,027,000,000
Eligible paper held.....	1,059,000,000
Maximum borrowings at any one time	425,200,000

Thus the total borrowing did not at any one time amount to more than about 40 per cent of the eligible paper held and only about 20 per cent of the eligible paper plus government securities.

From all these facts it seems a reasonable conclusion that the original eligibility requirements of the Federal Reserve Act did not constitute, nor can any such requirements constitute, an adequate control over the volume of Federal Reserve credit or member bank credit. The principal utility of these requirements has been their influence on the standards of banking practice, and even in that respect they have not been an unmixed blessing.

If the eligibility requirements of the Federal Reserve Act do not constitute an adequate control over credit the next logical question is what effective control the Reserve System has over the use of its funds by member banks. Control is of two general sorts which have come to be known under the two terms of "credit policy" and "banking policy." The instruments of credit policy are the discount rate, open-market operations, control over reserve requirements, and certain lesser instruments, all of which are general in their scope and application and will be discussed in later chapters on Federal Reserve policy. Banking policy on the other hand is specific and individual and concerns the relation between a lending Reserve Bank and a borrowing member bank. Banking policy is more concerned with the soundness of the loans made than with the effect on the general credit situation. Like any lender the Reserve Banks are greatly interested in the condition of the customers who borrow, more so in fact than over the spe-

cific collateral the customers may offer. The soundness of the borrower is more important than the collateral in most lending operations.

Banking Policy.—The original Reserve Act laid more emphasis on collateral than on the condition of the lender. It might even be questioned whether the lending operation was not conceived to be rather automatic. One section of the Reserve Act said, "Any Federal reserve bank *may* discount notes, drafts," etc., but another section used the word "shall."

> Sec. 4. Par. 8. Said board [of a Reserve Bank] . . . shall, subject to the provisions of law and the orders of the Federal Reserve Board, extend to each member bank such discounts, advancements and accommodations as may be safely and reasonably made with due regard for the claims and demands of other member banks.

On the basis of this latter paragraph some member banks have believed that borrowing was a legal right which a Reserve Bank might not refuse if eligible paper was presented. The Reserve System has never accepted this interpretation. Their attitude is epitomized by an expression which through countless repetition to borrowing member banks has acquired more than a tinge of humor, "this bank is not a penny in the slot machine." In more recent legislation the question has been clarified: the "shall" has been changed to "may" and a number of specific standards have been set up in addition to the general statements heretofore in the Act to aid a Reserve Bank in deciding whether any loan should be made.

Section 4 of the Federal Reserve Act as amended by the Banking Act of 1933 now reads as follows:

> . . . Each Federal reserve bank shall keep itself informed of the general character and amount of the loans and investments of its member banks with a view to ascertaining whether undue use is being made of bank credit for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions; and, in determining whether to grant or refuse advances, rediscounts or other credit accommodations, the Federal reserve bank shall give consideration to such information. The chairman of the Federal reserve bank shall report to the Federal Reserve Board any such undue use of bank credit by any member bank, together with

his recommendation. Whenever, in the judgment of the Federal Reserve Board, any member bank is making such undue use of bank credit, the Board may, in its discretion, after reasonable notice and an opportunity for a hearing, suspend such bank from the use of the credit facilities of the Federal Reserve System and may terminate such suspension or may renew it from time to time.

The revised form of this section as compared with its previous form given above clearly contemplates increased responsibility of the Reserve System for the way member banks use Federal Reserve credit. Other sections of the Banking Act of 1933 have a similar effect, especially sections 7 and 9.

Sec. 7. Paragraph (m) of section 11 of the Federal Reserve Act, as amended:

Upon the affirmative vote of not less than six of its members the Federal Reserve Board shall have power to fix from time to time for each Federal reserve district the percentage of individual bank capital and surplus which may be represented by loans secured by stock or bond collateral made by member banks within such district, but no such loan shall be made by any such bank to any person in an amount in excess of 10 per centum of the unimpaired capital and surplus of such bank. Any percentage so fixed by the Federal Reserve Board shall be subject to change from time to time upon ten days' notice, and it shall be the duty of the Board to establish such percentages with a view to preventing the undue use of bank loans for the speculative carrying of securities. The Federal Reserve Board shall have power to direct any member bank to refrain from further increase of its loans secured by stock or bond collateral for any period up to one year under penalty of suspension of all rediscount privileges at Federal reserve banks.

Sec. 9. The eighth paragraph of section 13 of the Federal Reserve Act, as amended:

. . . If any member bank to which any such advance has been made shall, during the life or continuance of such advance, and despite an official warning of the reserve bank of the district or of the Federal Reserve Board to the contrary, increase its outstanding loans secured by collateral in the form of stocks, bonds, debentures, or other such obligations, or loans made to members of any organized stock exchange, investment house, or dealer in securities, upon any obligation, note, or bill, secured or unsecured, for the purpose of purchasing and/or carrying stocks, bonds, or other investment securities (except obligations of the United States) such

advance shall be deemed immediately due and payable, and such member bank shall be ineligible as a borrower at the reserve bank of the district under the provisions of this paragraph for such period as the Federal Reserve Board shall determine: *Provided,* That no temporary carrying or clearance loans made solely for the purpose of facilitating the purchase or delivery of securities offered for public subscription shall be included in the loans referred to in this paragraph.

There has as yet been no experience in the application of these revisions of the law, for since the summer of 1933, when the revisions were made, the member banks have been practically out of debt at the Reserve Banks.

The principles which have in the past governed the arrangements which the Reserve Banks have made with individual member banks as to their borrowing were set forth in the annual report of the Federal Reserve Board for the year 1926, as follows:

In general, the basis of credit to be extended by a reserve bank to its member banks is defined in section 4 of the Federal reserve act, which states that the board of directors of a reserve bank shall[5] "extend to each member bank such discounts, advancements, and accommodations as may be safely and reasonably made with due regard for the claims and demands of other member banks." This statement in the basic law of the Federal reserve system underlies to a large extent the policy of the reserve banks and their attitude in individual cases toward extending credit to the member banks. The principle set forth in the act goes beyond the question of the technical eligibility and even of the intrinsic soundness of paper offered by a member bank to a reserve bank. Even where the paper is unexceptionable in every respect, the reserve bank must be fully assured in addition that further credit may be granted to this member, not only "safely and reasonably," but also "with due regard for the claims and demands of other member banks." This question arises not infrequently in cases where a member bank remains continuously in debt to a reserve bank for a considerable length of time. In such cases inquiry may fairly be made as to whether the member bank's use of reserve bank credit does not in effect amount to increasing its own capital out of reserve bank funds. Such use of funds arising from a cooperative pooling of bank reserves, which is the basis of the Federal reserve banks' lending power, would not be in accordance with the spirit of the Federal reserve act and

[5] Now changed to *may*.

would not be fair to the other member banks which may be active competitors of the borrowing bank. It may also impair the ability of the borrowing bank in case of insolvency to meet its obligations to depositors. Though there are circumstances that may explain and justify continuous borrowing by a member bank over a considerable period of time, particularly if the need for the borrowing arises from general economic conditions in the borrowing bank's locality, the funds of the Federal reserve banks are primarily intended to be used in meeting the seasonal and temporary requirements of members, and continuous borrowing by a member bank as a general practice would not be consistent with the intent of the Federal reserve act. In most cases the member bank can make adjustments of different kinds in its own affairs, which will enable it to repay its borrowings at the reserve bank and at the same time to strengthen its own position. The bank may find it advisable, for example, to increase its own capital or to bring about a better adjustment of the volume and maturities of its investments to the credit requirements of its local customers.

. . . In using their influence to discourage member banks from making continuous use of the lending facilities of the reserve banks, the operating officials of the reserve banks are not only protecting the resources of the Federal reserve system as a whole, but are also helping individual member banks to conserve their capacity to borrow at the reserve bank at times when adverse economic conditions in their localities and among their customers may make additional dependence upon the resources of the reserve system not only justifiable but necessary. In this manner the reserve banks are not only discharging their responsibility to the member banks under the act, but are also exerting their influence toward sounder general banking conditions in the interests alike of the member banks, their depositors, and the public.[6]

Methods Used.—With most of the member banks no question has ordinarily arisen concerning the safety or reasonableness of their borrowing from the Reserve Banks. Over a period of some years, as indicated earlier, the average number of member banks borrowing each month from the Federal Reserve System out of a total of about 9,000 members, was usually in the neighborhood of 3,000, and the banks which were borrowing were constantly changing. The temporary character of most of the borrowing is indicated by the fact that

[6] Thirteenth Annual Report of the Federal Reserve Board covering operations for the year 1926, pp. 4, 5.

the average maturity of each loan was about ten days, though loans were often renewed.

There was, of course, a difference between the city and country banks in this regard. The city banks, whose business naturally turns over much more rapidly than the country banks, usually borrowed on one day notes and if it was necessary to continue the loan for more than one day they ordinarily made a new note. The banks in small communities, on the other hand, whose distance from the Reserve Banks is greater and whose business ordinarily turns over more slowly, usually borrowed for longer periods. Banks borrowed generally as a result of seasonal and other temporary needs for funds and paid off their loans when the temporary needs were passed. Since the unusual demand for funds falls on different banks at different times, there were always some banks borrowing. Recently excess reserves have been so large that almost no borrowing has been necessary.

In dealing with most of the member banks it was possible, with propriety, to give the banks ready access to the borrowing facilities of the Federal Reserve Banks without the necessity for special negotiation for each loan. Applications for loans and discounts were received by mail or messenger and acted upon immediately, in much the same way as a commercial bank extends loans to a commercial borrower after his line of credit has been established. There were usually some banks, however, which tended to overuse the borrowing privilege, and careful provision was made to prevent its misuse. As an example of the methods employed to prevent too constant or too large use of the borrowing facilities of the Reserve System, the following methods have been employed by the Federal Reserve Bank of New York:

1. Bank examinations by state and national authorities, and by the Reserve Banks themselves, have been analyzed in order that Reserve Bank officers may be familiar with the condition and methods of operation of each member bank.
2. A special list of banks has been maintained whose general condition has been in one way or another unsatisfactory, and loans to this group of banks have been scrutinized with particular care.
3. Every bank continuously in debt at the Reserve Bank for what

seemed an unreasonably long period in view of the nature of its business was made the subject of special inquiry to determine the necessity for the borrowing.

4. Every bank borrowing in excess of its capital and surplus was automatically listed for observation.

Thus in every case where the borrowing threatened to become unreasonable in amount or duration, or unsafe, the bank was made the subject of special inquiry and was reminded of the principles governing the use of Federal Reserve credit. On rare occasions it has been necessary to prescribe for individual banks lines of credit which they should not exceed, and at times to insist upon liquidation of borrowings. In dealing with such cases it was never possible to lay down rigid rules, but each case had to be considered on its own merits.

In their relations with individual member banks the Reserve Banks encounter a series of problems not unlike, in their variety and complexity, the problems which the commercial bank encounters in its contacts with its borrowing customers. Each case is unique and requires individual treatment, although there are certain broad principles which apply to all.

Take as an example the perplexing problem of lending to a bank in the farming area of the Middle West in recent years. The First National Bank of Crestland, let us say, is loaded with doubtful farm paper, much of it representing sometime equities in real estate. It brings all its good paper to the Reserve Bank to rediscount. Shall the Reserve Bank take it and lend the bank the money? If the Reserve Bank refuses, failure may follow. If it makes the loan, it assumes the responsibility of continuing in operation a bank probably insolvent. If failure should then come, the depositors might find much of the good assets rediscounted at the Reserve Bank and unavailable to pay depositors. The Reserve Bank must consider not only the safety of its loan, but the interests of the depositors. Can the bank be saved by a loan? If not, will the depositors be better off under an immediate liquidation, or a later liquidation, when the bank may have sold or pledged many of its best assets? These are some of the questions the Reserve Bank has to face. The answer depends on a careful

scrutiny of each bank, in constant cooperation with state and national supervisory authorities, and also on general banking and business conditions, including the general effects of a possible bank failure.

This is, of course, an extreme case, but all Federal Reserve loans in greater or less degree involve credit problems with many of the same earmarks as the problems faced by commercial banks in their lending operations, with this addition: that the Reserve Banks have always to consider the public interest and the impartial service of all member banks.

A word of caution should be added to the foregoing discussion. No matter how carefully a Reserve Bank official examines the papers describing the condition of a member bank, and no matter how fully he may interview its officers, he can in the nature of the case gain only an imperfect knowledge of the operations of any single member bank. Only to a limited extent can he go back of the paper in the bank's portfolio and learn the purposes for which loans were extended. This is especially true, of course, in the case of large city banks with their thousands of transactions daily. Because of limitations of knowledge the Reserve Bank officer must be chary of passing judgment on the character of a member bank's operations and the causes which bring it to the Reserve Bank seeking a loan. The experience of the Reserve Banks has indicated pretty clearly that discretion in lending is justified only when it can be based on certain simple and obvious measures such as the ones laid down in the Annual Report of the Federal Reserve Board for 1926. Discretion in making loans to individual banks is, therefore, quite inadequate as a method of controlling the total volume of Reserve Bank credit. To put it another way, the qualitative control of credit beyond a certain point offers almost insurmountable difficulties.[7]

[7] U. S. House of Representatives, Subcommittee of the Committee on Banking and Currency, *Stabilization of Commodity Prices,* Hearings . . . Testimony of George L. Harrison before 72nd Congress 1st Sess. on H.R. 10517, April 13 & 14, 1932, Part 2.

U. S. Congress, Joint Commission of Agricultural Inquiry, Hearings . . . Testimony of Benjamin Strong before 67th Congress, 1st Sess. under Senate Concurrent Resolution 4, Part 13, August 2-11, 1921.

Benjamin Strong, "Control of Credit Through the Reserve System," *in* W. R.

There is a second reason why dealing with individual banks is not a satisfactory means of credit control, and that is the reason cited previously that the borrowing bank takes only the first step in the use of Federal Reserve credit, and that frequently the first step is one for which the borrowing bank itself has no direct responsibility. The full and final use of the credit is usually quite outside the control of the borrowing bank.

It is necessary that the Reserve System should protect itself from obvious abuse by borrowing banks. The Reserve Banks should not be "penny in the slot machines." But dealing with individual banks does not by itself constitute a satisfactory and effective means of credit control. The Federal Reserve Banks have by care largely protected themselves from losses through loans to unsound banks. They have assured themselves reasonably well that the paper they took was good. They have on the whole been reasonably successful in avoiding abuses of the borrowing privileges by banks which borrowed for excessively long periods or in excessive amounts. But they have never found a way to control the general volume of credit solely by exercising discretion in lending to individual banks. The Banking Act of 1933 clarifies the power of the Reserve Banks in dealing with individual member banks and adds certain new standards for judging whether loans should be made. These provisions make it somewhat easier for a Reserve Bank to deal with those relatively rare cases of member banks which appear to be extending excessive amounts of credit for speculative or unsound use. They do not constitute of themselves an effective instrument for control of the general volume of credit.

Loans to Individuals and to Industry.—Until the time of the great depression the Federal Reserve law did not provide any means by which the Reserve Banks could make loans di-

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Burgess, ed., *Interpretations of Federal Reserve Policy in the Speeches and Writings of Benjamin Strong,* Harper and Brothers, New York, 1930.

U. S. Senate, Subcommittee of the Committee on Banking and Currency, *Operation of the National and Federal Reserve Banking Systems,* Hearings . . . 71st Congress, 3rd Sess., Pursuant to S. Res. 71; Appendix, Part 6, Federal Reserve Questionnaires, 1931, p. 718.

rectly to individuals or to business concerns. But as the depression grew deeper, increasing complaint was heard that the commercial banks were becoming more strict in their lending policies and were not taking care of their customers. As a response to this complaint the Congress, in addition to the creation of a number of other lending agencies, authorized the Federal Reserve Banks to extend loans under certain limitations to private individuals and business concerns.

The Emergency Relief and Construction Act of July 21, 1932, amended section 13 of the Federal Reserve Act to permit the Federal Reserve Banks "in unusual and exigent circumstances" to discount commercial paper of the kinds and maturities eligible for discount for "any individual, partnership, or corporation, which is unable to secure adequate credit accommodations at other banking institutions." This paper had to be "indorsed and otherwise secured to the satisfaction of the Reserve Banks" and such loans could only be made during periods when they were authorized by the affirmative vote of not less than five members of the Federal Reserve Board.

While this authorization was so closely hedged about with limitations as to rule out most borrowers, the Reserve Banks made every effort to find borrowers of the sort indicated and interviewed several thousand applicants. As a result, however, only 23 loans were made, aggregating less than $1,000,000. In the Banking Act of 1935, the terms of this law were liberalized by changing "indorsed and otherwise secured" to "indorsed *or* otherwise secured."

The Emergency Banking Act of March, 1933, which provided the legal mechanism for reopening the closed banking system, authorized the Federal Reserve Banks to make advances to individuals against government securities. The purpose of this provision was to ensure the means of meeting payrolls and other necessary payments in communities without banks. As circumstances developed banks were reopened rapidly enough to take care of the situation and few loans were made under this provision.

Still another effort to enable the Reserve System to fill the breach apparently created by a cautious lending policy on the

part of commercial banks was made in June, 1934,[8] when the Reserve Banks (and the Reconstruction Finance Corporation as well) were authorized within much broader limitations to supply working capital to established industrial and commercial businesses. Loans could be made by any Reserve Bank for a period as long as five years and could take the form either of direct loans to industrial concerns or to financing institutions operating within its district, or the form of an agreement under certain conditions to discount loans of this sort for such financing institutions. It was provided, however, that these loans could be made only when credit was not obtainable on a reasonable basis from the usual sources. The law provided for the appointment of an Industrial Advisory Committee in each district which should review loans and make recommendations to the Reserve Bank. A part of the funds used in making these loans was provided from the increment resulting from gold revaluation in the Treasury on the basis of a highly complicated formula which might have the effect of returning to the Reserve Banks in part or in whole, the sum which they had been required to subscribe for stock of the Federal Deposit Insurance Corporation.

Under the terms of this law every case which came to the Reserve Banks was, of course, a borderline case, that is, a case to which some bank had refused to give credit, or a case in which the bank was unwilling to assume full responsibility. As a consequence each case had to be subjected to the most painstaking review and, as would be expected, investigations indicated that many of the applicants were not credit-worthy.

Up to the end of 1935, the Reserve Banks had received nearly 7,700 applications for loans totaling $307,000,000. They had approved 2,000 loans to a total amount of $125,000,000. Funds had actually been advanced totaling $42,000,000 and commitments were outstanding for an additional $28,000,000. In addition to these dollar results it may be added that the review which the staffs of the Reserve Banks and the Industrial Advisory Committees have been able to give to applications has resulted in a number of cases in the commercial

[8] Section 13b, Federal Reserve Act, as amended.

banks themselves deciding to extend credit, and even in cases where loans were not made, the applicant for a loan had the advantage of a full and impartial review of his application by a sympathetic third party which not infrequently pointed a way out of his difficulties. It seems improbable that this activity will be authorized by the Board much beyond the depression, as it is not an appropriate normal function for a bank of issue.

For convenience in reference, Table 11 has been prepared to show in summary form the lending and investing powers of the Federal Reserve Banks as affected by various amendments to the Federal Reserve Act. Fortunately for the students many of these powers are exercised only rarely. Ninety per cent of the operations consist of discounts and advances for member banks and open-market transactions in bankers' acceptances and government securities.

SUMMARY

1. Credit extended by the Reserve Banks takes three principal forms:
    1. Loans to member banks.
    2. Purchases of acceptances.
    3. Purchases of government securities.
2. In the first two of these forms the borrower usually takes the initiative and the Reserve Banks stand ready to extend credit at a rate. In the third the Reserve Banks usually take the initiative themselves.
3. The theory that only "self-liquidating" commercial paper should be the basis for loans to banks has encountered serious practical difficulties, beginning with the war need to support the government security market.
4. The amount of strictly eligible commercial paper in member bank portfolios has steadily dwindled until it now totals only 7 per cent of total loans and investments.
5. Because of the reduced amount of eligible paper and for other reasons the Banking Act of 1935 has broadened the

TABLE 11.—KINDS OF LOANS AND INVESTMENTS AUTHORIZED BY LAW FOR FEDERAL RESERVE BANKS

Kinds of Loans and Investments	Borrower or Market	Maturity	First Authorized	Section of Present Reserve Act
Loans to member banks				
Rediscounts of eligible paper (bills of exchange, drafts, notes, and acceptances)				
Agricultural, commercial, and industrial	Member banks	Up to 90 days	Original Act, 1913	Sections 13 and 24
Agricultural acceptances of member banks	Member banks, Federal Intermediate Credit banks, and Regional Agricultural Credit corporations	Up to 6 months	March 4, 1923	Section 13
Certain other agricultural paper		Up to 9 months	March 4, 1923 July 21, 1932	Section 13a
Bankers' acceptances drawn to create dollar exchange	Member banks	Up to 3 months	September 7, 1916	Section 13
Advances to member banks on their promissory notes				
Secured by eligible paper	Member banks	Up to 90 days	September 7, 1916	Section 13
Secured by direct U. S. Government obligations, or	Member banks	Up to 15 days	September 7, 1916	Section 13
Federal Intermediate Credit Bank debentures,[1] or	Member banks	Up to 15 days	March 4, 1923	Section 13
Federal Farm Mortgage Corporation bonds, or	Member banks	Up to 15 days	January 31, 1934	Section 13
Home Owners' Loan Corporation bonds	Member banks	Up to 15 days	April 27, 1934	Section 13
Secured by satisfactory collateral	Member banks	Up to 4 months	February 27, 1932	Sections 10(a) and 10(b)
Rediscounts for other Federal Reserve Banks	Reserve Banks	.....	Original Act, 1913	Section 11

Loans to others				
Discounts of and advances on				
Eligible paper, endorsed or secured[2]	Individuals, partnerships, corporations	Same as for member banks	July 21, 1932	Section 13
Direct U. S. Government obligations	Individuals, partnerships, corporations	Up to 90 days	March 9, 1933	Section 13
Loans to industry for working capital[2]				
Entered into directly, or	Industrial or commercial enterprises	Up to 5 years	June 19, 1934	Section 13b
In cooperation with other lenders	Industrial or commercial enterprises	Up to 5 years	June 19, 1934	Section 13b
Loans on gold coin or bullion at home or abroad	Any borrower—in practice, foreign central banks	.....	Original Act, 1913	Section 14, qualified by Gold Reserve Act of 1934
Investments				
Cable transfers	Open market	.....	Original Act, 1913	Section 14
Acceptances and bills of exchange				
Bills of exchange eligible for rediscount	Open market	.....	Original Act, 1913	Section 14
Bankers' acceptances (subject to regulation)	Open market	.....	Original Act, 1913	Section 14
Acceptances of the Federal Intermediate Credit Banks[2]	Open market	.....	March 4, 1923	Section 14
Securities				
U. S. Government				
direct obligations	Open market	Any maturity	Original Act, 1913	Section 14
obligations fully guaranteed by[3]	Open market	Any maturity	August 23, 1935	Section 14
Tax anticipation warrants of states and municipalities	Open market	Up to 6 months	Original Act, 1913	Section 14
Federal Intermediate Credit Bank debentures	Open market	Up to 6 months	March 4, 1923	Section 14
Federal Farm Loan bonds	Open market	Up to 6 months	July 17, 1916	Federal Farm Loan Act

[1] Up to six months' maturity.
[2] During such periods as authorized by the Board of Governors of the Federal Reserve System.
[3] Probably excepting obligations of the Reconstruction Finance Corporation; the law is not wholly clear.

base of eligibility. This brings the law in this country into closer conformity with practice abroad.

6. Liquidity of Federal Reserve loans depends more on the soundness of the borrowing bank than the kind of paper offered. Also some of the non-eligible paper is often sounder and easier to liquidate than strictly eligible paper.
7. Eligibility standards do not provide a means of controlling the volume of loans, because the amount of and reason for borrowing are usually quite independent of the kind of paper offered.
8. Control over Federal Reserve lending takes the form of credit policy, which like the discount rate and open-market operations is general, applying to the whole credit structure, and banking policy which is reflected in dealings between the Reserve Banks and specific borrowing member banks.
9. Banking policy is mainly directed to seeing that the loans made are sound and that no bank borrows more than its fair share of Federal Reserve credit.
10. Borrowing arises from the numerous different transactions of a member bank, many of them outside its control, and the Reserve Bank officer therefore has difficulty in passing judgment as to the propriety of the borrowing.
11. Moreover, the borrowing bank makes only the first use of Federal Reserve credit. Once released its uses cannot be followed.
12. Hence dealing with individual borrowing banks while necessary to prevent particular abuses, is not by itself an effective way of controlling the total volume of credit.
13. Authority given to Reserve Banks to make direct loans to industry has proved useful in providing a lender of last resort for borderline cases in the depression emergency.

CHAPTER V

Changes in the Currency

THE changes which the inauguration of the Reserve System has brought about in the country's currency may be summarized under two headings. This country has—

1. A new kind of currency.
2. A new mechanism for supplying currency.

As a consequence of these changes there have come about important differences in what is termed "elasticity" of the currency, and there have also been effected economies in handling it.

A New Kind of Currency.—The Federal Reserve note constitutes the principal physical point of contact between the man in the street and the Federal Reserve System. For almost every adult person, almost every day, handles Federal Reserve notes. They constitute about 70 per cent of the total amount of paper money in circulation in the United States.

Diagram 9 shows the make-up of the actual circulation of paper money in the United States (outside the Treasury and the Reserve Banks) in 1914, and for later illustrative times: the peak of the post-war boom in 1920, a reasonably normal period—1927, just before the banks were closed in 1933, and recently in 1936. The increase in currency which the war and high prices made necessary was provided almost wholly by issues of Federal Reserve notes. War wages and war prices were largely paid with this new currency, and when more nearly normal conditions returned, the Federal Reserve note remained the largest single element in the currency system. Later in the period of banking disturbances of 1930 to 1933 the unusual requirements of hoarding were met largely by additional Federal Reserve notes.

The Federal Reserve note was designed, in both its nature and method of issue, to provide currency expansion in response to business and banking requirements. By its nature it is directly related to the business or other activity which makes its issuance necessary, for it is issued against the assets of the Federal Reserve Banks, the changes in volume of which reflect the changes in the country's needs for funds.

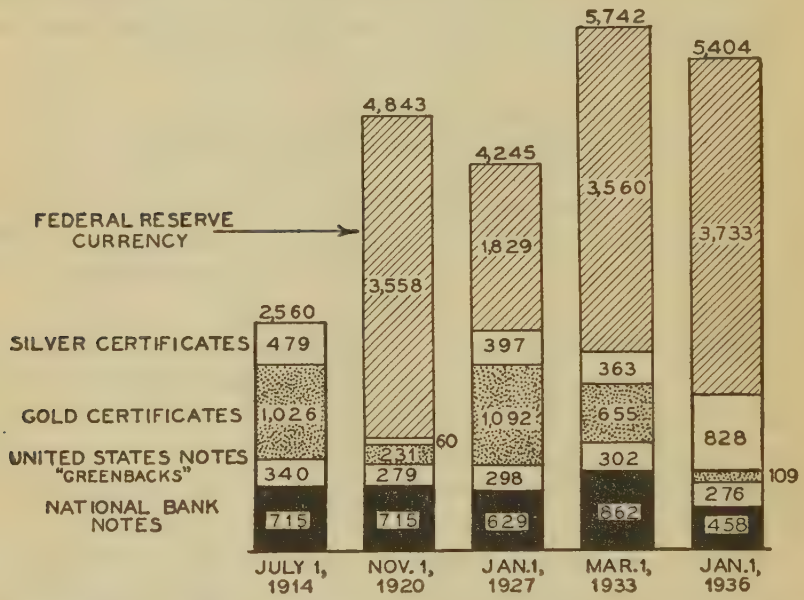


DIAGRAM 9—MILLIONS OF DOLLARS OF PAPER MONEY IN CIRCULATION IN THE UNITED STATES. THE FEDERAL RESERVE SYSTEM HAS PROVIDED THE NECESSARY ELASTICITY.

Prior to the establishment of the Federal Reserve System there were in general use four kinds of paper money:

1. Gold certificates, secured dollar for dollar by gold held in the Treasury of the United States, susceptible of being increased or decreased only as the amount of gold in the Treasury was increased or decreased.
2. Silver certificates, secured dollar for dollar by silver coin in the Treasury, the amount issued limited by law.
3. United States notes (greenbacks of the Civil War) originally secured by nothing but the promise of the government,

but now secured to the extent of about 45 per cent by gold, limited in amount by statute to $346,700,000.

4. National bank notes, issued by national banks, secured by certain United States Government bonds carrying the circulation privilege, and limited to the amount of these bonds; each national bank issuing notes was also required to maintain a 5 per cent redemption fund with the Treasury in Washington.

It will be noted that, although these four kinds of paper currency were interchangeable dollar for dollar one with another, the security behind them was in some cases 100 per cent metallic and in other cases mainly government obligations; also that the amount of the total circulation made up of these forms of currency was so fixed that it could neither readily be decreased in slack seasons and dull years, nor increased in busy seasons and periods of emergency.

The Federal Reserve Act in prescribing the security behind Federal Reserve notes introduced a new principle into our currency system. It specified a security which is sound and at the same time increases and decreases with the business and agricultural needs of the country when it provided that, apart from a minimum gold reserve, Federal Reserve notes might be secured by certain specified assets of the Federal Reserve Banks.

The paper used as security under the original terms of the Federal Reserve Act represented agricultural products or other goods in the process of production, or in movement from producer to retailer, in process of export or import, or on the shelves of retailer or wholesaler awaiting sale. The paper was required to bear the endorsement of a member bank, and its maximum maturity at the time of rediscount was ninety days, except in the case of agricultural paper, which might run for six months—later amended to run for nine months. A war-time amendment of the Reserve Act also provided that collateral notes of member banks secured by government obligations or eligible paper might be accepted as security for Reserve note issues. The acceptance of this kind of paper as col-

lateral was essential in the war, and at present it offers the most convenient form for short-time member bank borrowing, and when brought to a Reserve Bank usually represents business needs for funds as truly as paper having the form of a business obligation.

Again in March, 1932, by the Glass-Steagall bill, the collateral was extended to include, for a temporary period, government securities purchased by the Reserve Banks, to enable the Reserve Banks to meet a huge demand for gold from abroad added to an increasing domestic currency demand without accentuating the deflationary movement then under way.[1]

In the years 1933 to 1935, the currency arrangement in the United States was considerably altered. The external changes are partly shown in the 1936 column in Diagram 9. Gold certificates have been retired from circulation except for a small residue in hoards, abroad, or otherwise lost to sight. The volume of silver certificates has been largely increased under the Agricultural Adjustment Act as amended by the Gold Reserve Act of 1934 and the Silver Purchase Act of 1934. In addition national bank notes are now in process of retirement, as the Consols and the Panama 2's which carried the circulation privilege were called for redemption on July 1 and August 1 of 1935, and were paid off out of the increment resulting from gold devaluation. The additional circulation privilege given all government bonds with 3⅜ per cent coupons or less by the Federal Home Loan Bank Act of July 22, 1932, expired by limitation on July 22, 1935. Thus the national bank note, brought into being during the Civil War as a major currency reform, at last passes out of existence after experience has shown its inelasticity.

[1] The difficulty was not that the old legal limitations prevented the issuance of all the currency required. It was rather that a combination of gold exports and currency hoarding were forcing member banks constantly deeper in debt, for banks had to borrow to get gold and currency. This debt constituted pressure for deflation. The only way this debt pressure could be relieved was for the Reserve Banks to buy government securities, which would put funds into the hands of member banks to repay debt. But this very debt payment would decrease the collateral held by the Reserve Banks as backing for note issues. The Glass-Steagall bill by making government securities eligible as collateral enabled the Reserve Banks to relieve this situation by large purchases of government securities in 1932.

Its retirement was contemplated in the Federal Reserve Act, but the orderly program there prescribed was interrupted by the war, and only now has the redundance of money made it easily possible. In view of very low money rates and the surplus of funds in the banks, the retirement of those notes has caused no appreciable loss of earnings to the national banks. In finally retiring gold from circulation, both as coin and as gold certificates, this country takes a step long since taken by most other countries, which were forced to it by the war.

By the retirement of gold certificates and national bank notes the currency has been somewhat simplified. The retirement of the remaining United States notes would be a further logical step easily possible through the application of the gold now reserved against them and an additional amount from the gold devaluation increment.

One further change, the importance of which turned out to be largely psychological, was the authorization by the Emergency Banking Act of 1933 of the issuance of a new sort of Federal Reserve Bank note. In the banking collapse of March, 1933, even the flexible Federal Reserve note had scarcely been adequate to meet a demand from bank depositors to turn a large part of their deposits into cash. It was feared that when the banks were reopened after the banking holiday this demand might again be large, and there were even proposals to issue clearing house certificates. The Emergency Act therefore provided that the Reserve Banks could issue Federal Reserve Bank notes collateraled by any sound asset they possessed and requiring no gold reserve. While some of these notes were issued as a demonstration, and their availability was an aid in the program of giving assurance of the power to meet every need for currency, they were soon retired. The authority to issue these notes will expire when the President declares by proclamation that the emergency recognized by the proclamation of March 6, 1933, has terminated.

These experiences have appeared to demonstrate that a general collapse of the banking structure is a contingency for which almost no currency system can provide. Aside from such a collapse the Federal Reserve note has met varying

situations satisfactorily, and has proved its capacity both for expansion and contraction. It has indeed been necessary to change some ideas formerly held, especially as to the nature of the collateral for note issues. In assuring elasticity the specific collateral held has proved less important than the mechanism by which notes are issued. Limitations upon inflation or deflation are to be found in the broad credit policy pursued by the bank of issue and not in restrictions as to collateral or even reserves for currency. In fact Federal Reserve notes would be just as safe and just as elastic if they were an obligation of the Reserve Banks, without specific security but backed by all Federal Reserve assets, just as are the deposits.

Mechanism for Supplying Currency.—In the old days the country's reserve supply of currency was stored in the vaults of individual banks and particularly in the vaults of the Central Reserve city banks of New York, Chicago, and St. Louis. As was shown in a previous chapter, "cash in vault" of all national banks amounted to 13.5 per cent of their deposits, whereas today it amounts to only 2 per cent. The cash, consisting of gold and currency, which constituted the legal reserves of the banks, has been shifted physically from the vaults of the individual banks to the vaults of the Reserve Banks, and the gold itself has now been shifted into the possession of the Treasury Department, leaving to the Reserve Banks gold certificates, or credit on Treasury books. Bank reserves are thus no longer in the form of "cash in vault," but in the form of "balances with the Federal Reserve Bank." Banks only carry enough currency in their own vaults and tills to meet the needs of their customers from day to day.

When a member bank needs more currency for any purpose it draws it from the Reserve Bank in much the same way as the ordinary bank customer draws money from his bank. A bank simply draws its check against its "balance with the Reserve Bank" and takes the proceeds in cash. If this operation brings its reserve below requirements, the bank may restore it by borrowing. Conversely, when a bank has more currency on hand than it requires to meet customers' needs, it returns the money to the Reserve Bank and gets a deposit credit for

it, and repays any loan it may owe the Reserve Bank. Non-member banks follow somewhat the same procedure with their city correspondents, which in turn draw upon the Reserve Banks.

The first result of this change in location of the country's reserve cash is that it is centralized in the Reserve System instead of being scattered among thousands of individual bank vaults. This means that the cash is more readily available whenever there is an unusual need.

The second result of the concentration of reserve currency in the Reserve Banks, which also have the note-issuing power, is that the process of extraction of currency from the Reserve Banks in time of seasonal or emergency need is less painful than the operation used to be at times when currency circulation could be increased only by withdrawing from individual banks their cash reserves.

Before the Federal Reserve System, bankers throughout the country who needed currency drew on New York or other centers, and when the need was past returned surplus funds to those centers. The banks in principal centers and particularly New York were the nearest approach to bankers' banks, and they planned as far as they could to keep enough margin of cash on hand to meet seasonal and emergency demands. This meant that at most times they had more cash than was needed and at other times less than was needed. The maintenance of these cash reserves on which the country might draw was an expensive procedure, for which the banks in the centers were paid by large bankers' balances maintained with them and by high interest rates at periods of greatest demand. In any considerable emergency the supply of cash was inadequate, because at such a time banks were naturally unwilling, and were also forbidden by law, to pay out their minimum legal reserves. Elasticity was limited and was obtained at a stiff price.

The Federal Reserve Act with its amendments placed the country's reserve cash in institutions not organized for profit which can afford to let cash lie idle in readiness for seasonal and emergency needs, and which have as well the note-issue privilege and are thus in a position to meet almost any de-

mand. The outside limit to paying out Federal Reserve notes, in the absence of special action by the Board of Governors of the Federal Reserve System,[2] is the legal requirement that each Reserve Bank must have a reserve in gold certificates of 40 per cent against Federal Reserve notes and 35 per cent in gold certificates or lawful money against deposits. The collateral requirement has not operated as a limit on currency issues. Within the limit of the reserve percentage, restraint on issues of currency by the Reserve Banks is found in the discount rate and other instruments of Federal Reserve policy.

The demand for currency is normally the principal reason for the putting in use of Federal Reserve credit. This relationship may be illustrated by Diagram 10, which appeared originally in the Federal Reserve Bulletin for July, 1926, but has here been continued through 1935. One line shows the monthly averages of daily figures of the amount of money in circulation and the second line shows the total amount of Reserve Bank credit in use, including not only loans directly to member banks, but purchases of bills and securities by the Federal Reserve Banks as well.

The amount of Reserve Bank credit required from time to time is, of course, influenced by other factors than currency, including gold exports and imports and changes in requirements for bank reserves because of changes in bank deposits. In the period from 1922 to the middle of 1924, for example, Reserve Bank credit was decreased because heavy gold imports were used by the banks of the country to repay loans at the Reserve Banks. But in normal times, when the gold movement is smaller, changes in currency, accompanying changes in business activity, are by far the most influential factor in calling forth additional Reserve Bank credit or in retiring it. To put the matter in its simplest terms, in normal times changes in the amount member banks borrow from the Reserve Banks are due principally to changes in their customers' currency requirements.

[2] The Board of Governors of the Federal Reserve System has authority to suspend reserve requirements for thirty days and renew the suspension for periods of fifteen days each, with the imposition of a tax, a difficult power to use because it is evidence of distress.

In currency transactions the Federal Reserve Banks are largely passive. They do not force money into circulation nor force it back from circulation. A low discount rate may make it easier for member banks to borrow and so obtain currency; a high discount rate may make it more difficult. But the initiative in withdrawing or returning currency is always taken by the member bank.

It is the facility with which member banks can borrow at the Reserve Banks which is primarily responsible for currency

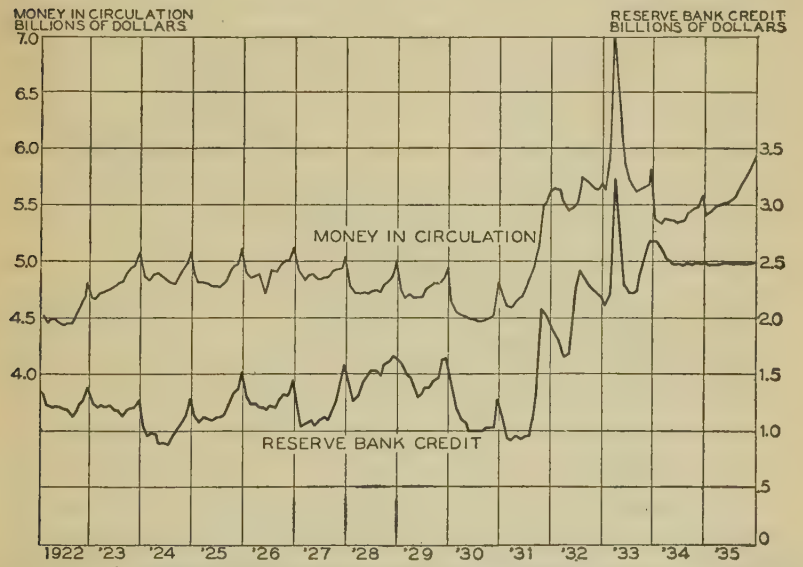


DIAGRAM 10—CURRENCY REQUIREMENTS ARE A MAJOR FACTOR IN CALLING RESERVE BANK CREDIT INTO USE.

elasticity, and it makes little difference at first whether the Reserve Bank pays out to the member bank Federal Reserve currency, silver certificates, or United States notes. In a certain sense the Reserve System has made all types of currency elastic, because all can be paid out in amounts required, and in normal times they all tend to flow back to the Reserve Banks when they are not actively used in the business of the country.

Elasticity in Practice.—An interesting test of the elasticity of currency under the Reserve System may be made by com-

paring currency movements in this country with those of Canada. For many years before the adoption of the Reserve System the Canadian banking system was frequently held up as a model which might well be copied, at least from the point of view of currency elasticity. Canada is a country peculiarly in need of an elastic currency, for the nation's business is centered in agriculture, which requires much larger amounts of

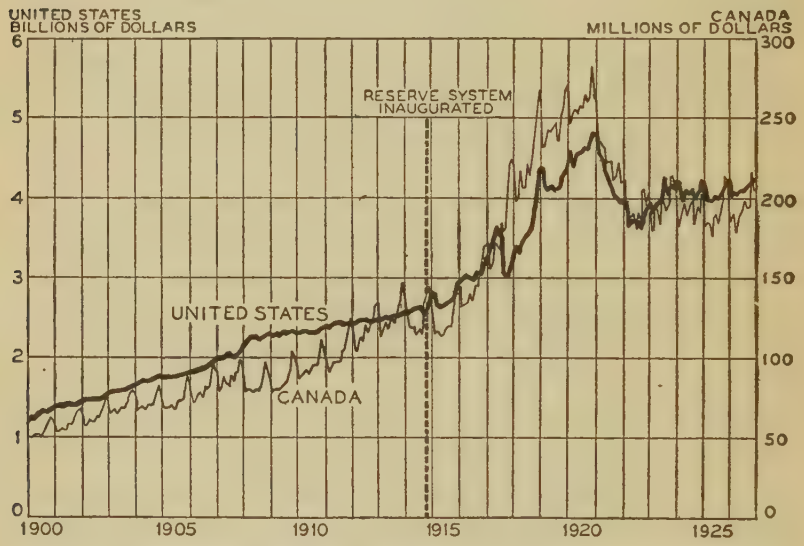


DIAGRAM 11—BEFORE 1914 THE CURRENCY OF CANADA WAS FLEXIBLE IN MEETING CHANGES IN BUSINESS NEEDS, BUT CURRENCY IN THE UNITED STATES WAS RIGID AND INFLEXIBLE. SINCE 1914 BOTH HAVE BEEN FLEXIBLE.

currency in the fall than at other times of year. Canadian bank note currency, an asset currency, has proved itself flexible.

Diagram 11 shows the fluctuations in paper money in circulation in Canada and in the United States before and since the establishment of the Reserve System. The two lines prior to 1914 tell the story of this country's currency difficulties. While the flexible Canadian currency responded regularly to changes in the seasonal need, our own was rigid, inflexible.[3]

In the fall of 1914 the shock of the World War forced the

[3] This point was demonstrated by E. W. Kemmerer, *The ABC of the Federal Reserve System,* Princeton University Press, 1918.

use of the temporary Aldrich-Vreeland currency, but shortly thereafter the Reserve Banks were opened for business, and Federal Reserve notes became a part of this country's currency. From that time on there began to be fluctuations here corresponding somewhat to the changes in Canada. The United States does not need as large a percentage of fluctuation as does Canada; its industries and trade are more diversified. But the way the currency has fluctuated since an elastic element was added demonstrates that we had been suffering in the past from a kind of currency paralysis. The extra money required in busy seasons could be drawn only from bank vaults, reducing bank reserves and causing a tightening of money rates.

Currency, Wages, and Trade.—The typical seasonal changes which now appear to be characteristic of currency circulation are largely a reflection of the seasonal changes in wage payments, and the retail expenditures for which currency is principally used. A vast part of the country's business requires little or no currency. Foreign trade, wholesale trade, security transactions, freight movements, etc., are carried on by the use of checks or other credit devices. Wage payments and family expenditures are the principal uses of currency.

Diagram 12 illustrates the relation between currency in circulation and a combined index of factory payrolls and retail trade as measured by department store sales, taken from the Federal Reserve Bulletin, July, 1926, and brought up to date. The data included in the combined index are only a sampling of the many uses of currency, but the correspondence of the movements of the two lines indicates a close connection between them until currency hoarding began on a large scale in 1931.

Characteristic Movements.—A by-product of the centralization of currency reserve in the Reserve Banks is that it is now possible to trace day by day currency changes which were quite lost to view when they were scattered among individual banks. It is possible to observe in detail the relationships between trade and currency movements which have been commented upon broadly in the preceding paragraph.

Take as an example what happened to currency circulation over the Christmas period in 1924. Retail trade at Christmas time is always larger than at other times in the year; in fact, department stores of New York City and other cities usually do about one-seventh of their year's business in the month of December alone. This results in a considerable increase in the need for hand-to-hand currency, and there are other needs as well arising from increased payrolls, Christmas gifts, increased

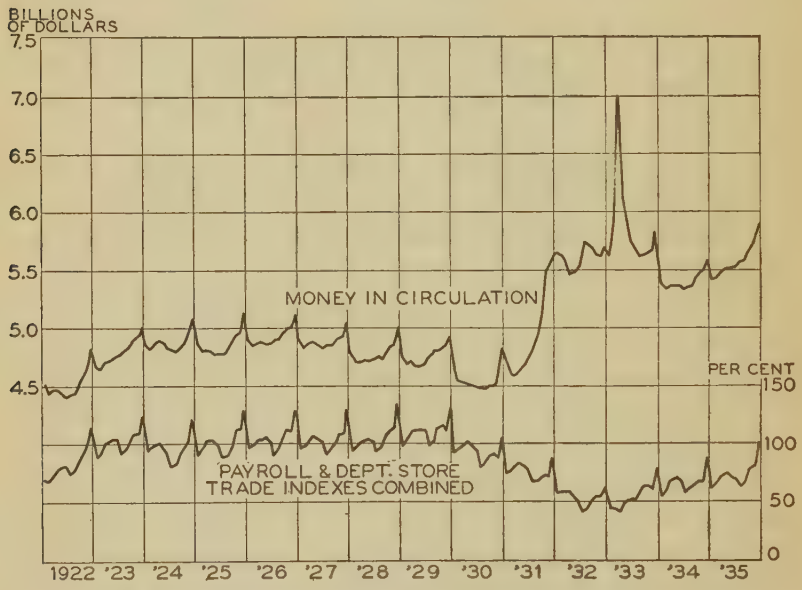


DIAGRAM 12—FACTORY PAYROLLS AND DEPARTMENT STORE TRADE ARE TWO MAJOR FACTORS IN DETERMINING THE NEED FOR CURRENCY.

travel, larger food purchases, etc. The figures for currency withdrawals and receipts at the Federal Reserve Banks illustrate the way in which this special demand for currency was met. Prior to Christmas there was paid out about $300,000,000 of currency, all of which was returned to the Reserve Banks within the two or three weeks following Christmas, as shown in Table 12.

Here is a typical case of currency elasticity. Currency was put into circulation to meet a temporary need and then retired. An interesting and important fact about the movement

TABLE 12.—HOW CURRENCY FLOWS IN AND OUT OF THE RESERVE BANKS

(In millions of dollars)

Week Ended	Paid Into Circulation (Net)			Received From Circulation (Net)		
	Federal Reserve Notes	Other Money Mostly Gold Certificates*	Total	Federal Reserve Notes	Other Money Mostly Gold Certificates	Total
1924						
Nov. 26.....	22	18	40	..	..	..
Dec. 3.....	4	10	14	..	..	..
Dec. 10.....	5	23	28	..	..	..
Dec. 17.....	18	45	63	..	..	..
Dec. 24.....	70	54	124	..	..	..
Dec. 31.....	..	..	..	80	74	154
1925						
Jan. 7.....	..	..	..	57	39	96
Jan. 14.....	..	..	..	67	22	89

* Payments include gold drawn for export.

was that elasticity was not confined to Federal Reserve notes. Gold certificates moved into and out of circulation just as freely. These data were prepared before gold certificates had been retired, but the movement is typical of silver certificates and other forms of currency as well.

Payrolls and Holidays.—A regular though less spectacular currency movement is the typical weekly movement, largely reflecting withdrawals for payrolls and the return of this currency as it is re-deposited in banks. The movement is so regular that with a few exceptions one week is almost a repetition of another. On Thursday banks begin to withdraw from the Reserve Banks the currency which their customers will

require for their weekly payrolls and for week-end expenditures. Thursday and Friday there are large withdrawals for these purposes. Saturday there are smaller withdrawals. On Monday this money begins to flow back to the Reserve Banks and the flow continues on Tuesday and Wednesday. Of course, there are some withdrawals on Monday, Tuesday, and Wednesday, and some deposits on Thursday, Friday, and Saturday, but deposits almost always exceed withdrawals on the first three days of the week, and withdrawals exceed deposits in the last three days.

This weekly currency movement may be illustrated by the daily figures for a typical half year in normal times at the Federal Reserve Bank of New York. Table 13 shows the net movement each day from April 5 to October 2, 1926, between New York City banks and the Federal Reserve Bank. The "+" signs indicate net deposits of currency in excess of withdrawals and the "—" signs net withdrawals.

The first notable feature of the table is the clean division between the first and second halves of the week. The first half shows predominantly the "+" signs of net deposits and the second half "—" signs of net withdrawals. The average or typical weekly movement is shown at the foot of the table. The period was one of increasing demands for currency and hence withdrawals somewhat exceeded deposits.

A careful study of the table leads to a number of other conclusions about the country's use of currency. There is a distinct tendency towards heavy withdrawals at the end of the month for monthly payrolls and a less noticeable tendency around the fifteenth of the month. There are larger withdrawals just before holidays, and deposits afterwards. On the basis of these figures payrolls and holidays seem to account for most of the day-to-day fluctuations in currency circulation.

Size of Currency Operations.—Most of the bills and coin in use in this country have been placed in circulation by the Federal Reserve Banks. The principal exception is national bank notes, which were put into circulation by national banks, and these are in process of retirement. Other forms, silver

TABLE 13.—DAILY NET CURRENCY MOVEMENT IN NEW YORK CITY TO OR FROM THE FEDERAL RESERVE BANK OF NEW YORK

(+ indicates deposits in the Reserve Bank and − withdrawals from the Reserve Bank)
(In millions of dollars)

Week Beginning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Apr. 5	+ 5.4	+ 11.7	+ 6.7	− 2.5	− 4.5	− 1.3
12	+ 3.0	+ 7.7	+ 3.3	− 8.7	− 8.0	− 2.0
19	+ 2.6	+ 8.3	+ 4.1	− 7.0	− 5.2	− 1.0
26	+ 1.5	+ 5.9	+ 3.5	− 10.8	− 13.7	− 3.8
May 3	+ 0.1	+ 8.1	+ 6.5	− 5.7	− 5.5	− 0.3
10	+ 3.5	+ 9.3	+ 3.9	− 9.1	− 9.7	− 2.2
17	+ 0.8	+ 7.8	+ 5.8	− 6.8	− 7.2	− 0.9
24	+ 2.6	+ 6.3	+ 2.9	− 13.5	− 12.4	− 4.0
31	Holiday	+ 0.7	+ 7.2	− 5.2	− 5.4	+ 0.4
June 7	+ 6.1	+ 9.8	+ 5.0	− 5.5	− 7.1	− 1.3
14	− 0.3	+ 3.7	+ 3.0	− 7.7	− 6.8	− 1.6
21	+ 3.2	+ 7.7	+ 4.1	− 7.5	− 8.2	− 1.2
28	− 0.9	+ 1.6	− 1.2	− 14.8	− 14.0	− 0.8
July 5	Holiday	+ 4.5	+ 12.8	− 0.8	− 4.1	+ 1.0
12	+ 4.0	+ 10.0	+ 3.6	− 7.8	− 6.3	− 2.1
19	+ 0.8	+ 6.7	+ 4.3	− 7.5	− 7.2	− 1.2
26	+ 1.1	+ 6.5	+ 0.8	− 10.5	− 9.6	− 3.8
Aug. 2	− 4.6	+ 5.5	+ 3.2	− 8.7	− 7.2	− 0.3
9	+ 2.2	+ 7.2	+ 3.1	− 9.8	− 9.3	− 2.6
16	− 0.7	+ 4.6	+ 3.2	− 8.8	− 8.2	− 0.6
23	+ 2.3	+ 7.0	+ 3.4	− 9.2	− 7.7	− 1.3
30	− 2.3	− 1.8	+ 3.9	− 11.1	− 8.2	− 1.8
Sept. 6	Holiday	+ 0.8	+ 7.9	− 6.0	− 4.5	+ 0.6
13	+ 3.2	+ 8.4	+ 2.2	− 8.3	− 6.3	− 0.4
20	+ 1.5	+ 7.5	+ 4.4	− 6.2	− 6.0	− 0.3
27	− 8.5	+ 5.6	− 0.9	− 13.5	− 11.4	− 2.7
Average	+ 1.2	+ 6.2	+ 4.2	− 8.2	− 7.8	− 1.4

certificates, United States notes, and Federal Reserve notes are placed in circulation principally by the Reserve Banks. These banks are constantly receiving from the Bureau of Engraving and Printing of the Treasury Department in Washington, where all money is printed, supplies of new money. They are constantly receiving from the member banks currency in all stages of wear. Used currency is sorted, inspected for counterfeits, and all badly worn notes are returned to the Treasury, and new notes issued instead.

Early in 1936 there was in circulation in this country, in the pockets of individuals, in the safes and tills of business concerns and banks, in socks, teapots, tin boxes, etc., and actually passing from hand to hand in trade not far from six billion dollars of money. In 1935 over ten billion dollars of currency and coin passed through the Reserve Banks. At this rate the total amount of money in circulation passes through the Reserve Banks nearly twice a year.

To handle so large a volume smoothly and to be prepared for emergencies the Reserve System carries in Washington and in the vaults of the twelve Reserve Banks and their twenty-five branches and two agencies a reserve of more than six billion dollars of new currency in addition to the working stock of old currency. Practically no bank is distant more than twenty-four hours and the vast majority of banks are distant only overnight from one of these currency depots. An adequate supply of currency is thus readily obtainable.

The mechanical handling of currency is, in terms of volume of work, one of the largest of the functions of the Federal Reserve Banks. In the case of the New York Reserve Bank, for example, a force of about 300 people out of a total clerical staff of 2,400 is employed solely in handling currency and coin. Counting of coin has for some years been a machine operation and more recently a machine has been invented and adopted for counting paper money, which almost doubles the per capita daily output of employees. The expense of the currency and coin operations of the New York Reserve Bank, including printing costs, for which the bank pays the Bureau of Engraving and Printing, the cost of sorting, counting, wrap-

ping, paying, and shipping, and including overhead expense, is about $1,800,000 a year or about 23 per cent of the total expenses of the bank. In the other Federal Reserve Banks the expense of handling money has much the same relation to total expenses. In taking over this function and absorbing all costs the Federal Reserve Banks have relieved the United States Treasury, which used to do much of the work through the old Subtreasuries (now abandoned), and have also relieved the large banks in money centers, which used to perform this service for their out-of-town correspondents. The centralization of the function, moreover, in the Reserve Banks makes a quantity job of it. In addition to its service in giving the currency elasticity the Federal Reserve currency mechanism is an effective public economy.

SUMMARY

1. The Federal Reserve System has supplied a new kind of currency, the Federal Reserve note, which now constitutes about 70 per cent of the total paper money in circulation in the country.
2. This new currency increases or decreases in volume to meet the changing requirements of business.
3. The concentration of reserve supplies of currency in the Reserve Banks gives elasticity to all forms of currency, for added amounts can be drawn into use when needed.
4. Member banks draw currency from the Reserve Banks in much the same way that any customer draws money from a bank. When the need for currency is large, member banks usually have to borrow from the Reserve Banks to maintain their reserves. The desire of banks to repay this borrowing is one of the forces that bring currency back to the Reserve Banks promptly when the unusual need is passed.
5. The change that has taken place in the elasticity of currency may be illustrated by comparing the seasonal variations in the amount of currency in circulation in this country and Canada. Formerly the Canadian currency responded promptly to seasonal changes in business, but this country's

currency was inflexible. Now the currency here shows seasonal fluctuations much like those in Canada.

6. Fluctuations in currency circulation normally reflect principally changes in payrolls and retail trade. There are notable increases at regular payroll periods and at holidays, particularly at Christmas.
7. The mechanical handling of currency is in terms of volume of work one of the largest functions of the Reserve Banks. In 1935 they handled ten billion dollars of currency and coin. The total amount of money in circulation passes through the Reserve Banks nearly twice a year.

CHAPTER VI

Improved Methods of Business Settlements

IN THE days before the Federal Reserve System when Peter Brown, hardware merchant of Canyon, Colorado, settled his bills for the month it was quite a complicated process. The bill from the United Hardware Company of Madison, Wisconsin, bore the legend, "This bill payable only in Chicago funds." The Buffalo Steel Plow Company invoice called for a draft on New York. The St. Louis Screw Corporation asked for settlement in St. Louis funds. Brown's check book on the People's Bank of Canyon could not be used in paying most of his out-of-town bills, and every month Brown had to purchase at his bank seven or eight drafts on Chicago, New York, and other centers. He paid several dollars a month for these drafts.

Today when Peter Brown pays his bills he rarely has to buy a draft. He can settle practically all bills with his own checks on the People's Bank. This is because, in general, invoices no longer specify that settlement must be made in drafts on particular centers. Checks on the People's Bank of Canyon, Colorado, are accepted in every part of the country.

It seems a simple thing for concerns doing a national business to omit from their invoices a single line specifying what funds will be accepted in payment, but that omission reflects a transformation in the methods of check collection, a transformation which constituted a new and important step in the evolution of sound and efficient methods of business settlements in the United States.

Evolution of Business Settlements.—Perhaps the first step taken by the United States as a nation in providing adequate means for business and financial settlements was the passage of the Coinage Act of 1792, which gave the country a stand-

ardized coinage which might circulate at par value, 100 cents on the dollar.

Paper currency provided our next series of problems in business settlements. During the first half of the nineteenth century we were trying various experiments in securing a satisfactory currency with which debts might be paid and business transactions settled. During that period people were under the necessity of scrutinizing every bank note which came to them, and frequently incurred losses because paper money received, even when issued by sound banks, could not be redeemed at its full face value. Banker and merchant kept at hand a "Ready Detector" to identify currency and determine its true value. This condition was largely remedied by the passage of the National Bank Act in 1863-1865, which taxed out of existence the old state bank notes and provided for the issuance of a national bank note currency, secured by government bonds and accepted at every national bank at par value.

Checks were the third means of business settlement which called for standardization. The second half of the nineteenth century, which was notable for the growth of organized industry, remarkable railroad expansion, and a corresponding financial development, was notable as well for the widespread development by American business and finance of a new means for making settlement in business transactions—the bank check. By the end of the century studies undertaken for the Comptroller of the Currency by Professor David Kinley indicated that at least 80 per cent of the country's business was settled by check and 20 per cent or less by the use of coin and currency.[1] Other estimates run as high as 90 per cent.

The problems arising from the widespread use of checks were similar to the old currency problems. As the business man previously had scrutinized the currency he received to make sure it could be redeemed at its face value, without deductions, so at a later date he scrutinized checks to make sure that they could be turned into cash rapidly at par value, 100 cents to the dollar. The acceptability of checks as substitutes

[1] *Annual Report,* Comptroller of the Currency, 1896, I, 89.

for coin or currency depended on rapid convertibility into cash, dollar for dollar.

Clearing House Introduced.—The first step in securing rapid settlement of checks was the introduction of the clearing house. The New York City Clearing House, the first in this country, was established in 1853. Before that time each of the fifty-two banks in New York City sent messengers to each of the other banks with packages of notes and checks.

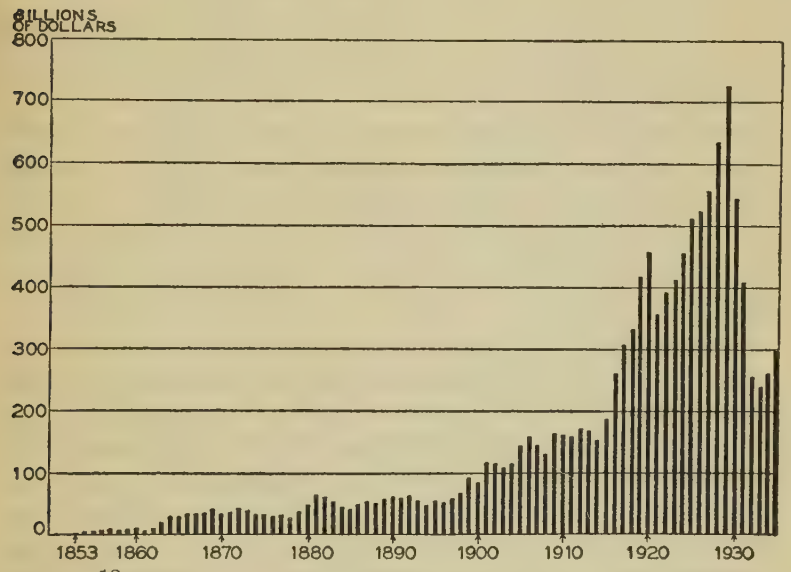


DIAGRAM 13—CLEARING HOUSE OPERATIONS IN THE UNITED STATES INCREASED STEADILY IN DOLLAR VOLUME UNTIL THE GREAT DEPRESSION.

Each of the fifty-two banks kept detailed ledger accounts for each of the other fifty-one banks. Under this cumbersome practice daily settlements were impossible and a weekly settlement was made every Friday. This postponement of the day of reckoning and the abuses it fostered, together with the inefficiency of the old plan, made reform essential to any wide use of checks. The clearing house was successful immediately upon its establishment, although four of the original fifty-two banks could not stand the test of daily settlements, and were expelled.

The clearing house idea spread rapidly to most of the large

cities and the amount of checks handled through clearing houses rose, as shown in Diagram 13, from about one billion dollars a year, when only the New York Clearing House was in operation, to over 700 billions in 1929. Due to the depression, it dropped to less than 250 billions in 1933, and since then has risen slightly.

A Major Defect.—But the growth of clearing houses did not remedy one major defect in the check-collection scheme—until 1916 there was no simple economical method for collecting checks between different towns and cities; there was no nation-wide system for the collection of checks corresponding to the city clearing house.

To collect checks drawn on out-of-town banks, each bank had to make special arrangements with banks in other centers, and the machinery of check collection thus became a complicated maze of individual relationships between banks. As a result check collection was expensive, slow, and at times uncertain.

The expense of check collection to the business man was of two kinds: The first expense resulted from the time required for collection. The bank in which the check was deposited lost the use of the funds, if it allowed the depositor to draw against the check while it was in process of collection. To cover this expense most banks made an *interest charge*, sometimes called a collection charge, or required the customer to keep a balance sufficient to cover checks in process of collection. This charge was sometimes made even when customers were not allowed to draw against uncollected funds.

The second kind of expense was a charge made, not by the bank collecting the check, but by the bank paying its own check. This charge purported to cover the cost of providing funds to pay the check in a distant city. In theory the paying bank had to ship currency or pay the cost of maintaining a bank balance in a distant center. In practice, of course, checks presented to a bank for payment from other cities were largely offset by checks moving in the opposite direction, and only the balance between incoming and outgoing checks had to be settled. But because theoretically the payment of every check

presented from a distance involved an expense, it was the custom for most banks outside large centers to make a small charge for the service. When they paid a check for $100 they deducted from 10 to 25 cents and paid only $99.90 or $99.75. This deduction from face value in paying checks was known as an *exchange charge*, because the bank making the payment was, in theory at least, exchanging local funds for funds in some other center. It was in theory a transaction in inland exchange; and in those days there was frequently a premium or discount on inland exchange.

Some banks when collecting checks for their customers absorbed the exchange charges they had to pay, but most banks passed the charge back to the customer. The business man who accepted in payment of a bill a check for $100 drawn on a distant bank, found that it was worth not $100, but perhaps $99.75. It was largely to avoid this loss, which on thousands of transactions amounted to a considerable sum, that the United Hardware Company, the Buffalo Steel Plow Company, and the St. Louis Screw Corporation of our illustration declined to take checks from Peter Brown drawn on the Canyon, Colorado, bank.

Expense, Delay, and Risk.—Business men and bankers were constantly searching for ways in which they could avoid the payment of this exchange charge. One way of avoiding the charge was, as we have seen in the case of Peter Brown, for wholesale houses to accept only drafts on large nearby centers. Another way was to accept out-of-town checks, but make special arrangements to present them for payment, not by mail from a distance, but from the same or a nearby town; so that the paying bank would have no occasion for charging exchange. If a St. Louis bank received a Canyon, Colorado, check it might send it to a bank in Denver, Colorado, which regularly collected checks on the Canyon bank, and by reason of its special arrangements could make the collection without being charged exchange.

But the St. Louis bank might not have a correspondent in Denver and therefore might send the check to a Chicago bank which did have such a correspondent. A check might be sent

to three or four cities before it was collected. Indirect routing of this sort added further delay to a check-collection scheme, which, for lack of any nation-wide system, was slow at best. Delay of this sort increased the amounts of interest which banks charged their customers for the use of uncollected funds.

Delay also increased the risk of non-collection. Every day which elapsed before the check was presented for collection increased the danger of return for lack of funds, and the danger from the failure of some bank handling the check on its long journey, or of the bank on which the check was drawn. Each day of delay before the depositor of a check was notified of its non-payment delayed the presentation of claims and increased the risk of non-payment.

The old haphazard system in collecting country checks thus bore fruit in expense, delay, and risk, and banks were constantly searching for means by which these evils might be corrected. Many city clearing houses organized country check departments to systematize, in part at least, the collection of out-of-town checks. Many country banks situated near cities arranged to have checks drawn upon them settled through their correspondents in the city clearing house. These and other schemes were only partly successful, and when Federal Reserve legislation was under discussion there was general insistence that it should include a nation-wide plan for check collection.

A New Mechanism.—The Federal Reserve System provided a mechanism for nation-wide check collection, to do for the banks of the nation very much what the clearing house does for the banks of the city. Twelve Reserve Banks, with twenty-five branches, provide offices within easy reach of every bank in the country. Over 6,400 member banks, with 85 per cent of the country's commercial banking deposits, keep their reserves deposited at these Reserve Banks—and so provide a natural mechanism for check settlements. Debits from collections can be charged to these reserve deposits, and credits can be added.

For settlements between the Reserve Banks there has been set up that ingenious device, the gold settlement fund (now

the inter-district settlement fund), lodged in Washington with the Board of Governors, and represented by a gold credit on the books of the Treasurer of the United States. This fund is owned by all the Federal Reserve Banks, and settlements between Reserve Banks are daily effected by bookkeeping entries, on telegraphic advice, changing the proportion of the gold fund which the different banks own.

In these ways the Reserve System provides channels through which the funds represented by checks may flow readily from one part of the country to another, and through which settlements of these checks may be made with great rapidity and at a minimum of expense.

The operation of the Federal Reserve check-collection mechanism in its simplest form is as follows: When Peter Brown's check on the People's Bank of Canyon, Colorado, comes to the St. Louis Screw Corporation, it is deposited with the Third Trust Company of St. Louis, and collection takes the following course:

1. The Third Trust Company deposits it for collection with the Federal Reserve Bank of St. Louis.
2. The Federal Reserve Bank of St. Louis sends it to the Denver branch of the Federal Reserve Bank of Kansas City.
3. The Denver branch sends it direct to the People's Bank of Canyon.
4. The People's Bank settles with the Denver branch in Denver funds or Federal Reserve funds.
5. On receipt of this remittance check the Denver branch gives the Federal Reserve Bank of St. Louis credit immediately. On the same day the Federal Reserve Bank of St. Louis gives the Third Trust Company credit. An immediate bookkeeping settlement between Reserve Banks thus takes the place of mail remittance.

As a matter of practice, the average time it takes for the collection of a check drawn on any point has been established by experience and is reflected in a printed schedule which each Federal Reserve Bank prepares and distributes to its members.

Accordingly, the Federal Reserve Bank of St. Louis automatically gives the Third Trust Company credit for Peter Brown's check five business days after it is deposited. Before the establishment of the Federal Reserve System it would have taken about ten days. The principal saving arises from the elimination of remittance by mail which is replaced by telegraphic settlement between Federal Reserve Banks. Time is also saved by more direct routing.

There are other special arrangements which have been worked out to secure greater speed of check collections. Some of the Reserve Banks have their own post offices and send their mail pouches direct to mail trains, and thus save the few hours that would be required to send mail to central post offices. Many member banks handling a large volume of checks have made arrangements to send checks direct to Federal Reserve Banks of other districts instead of through their own Reserve Banks. Settlement, however, is effected on the books of their own Reserve Banks. A number of county clearing arrangements have been devised by which member banks in the same county may exchange checks directly, and the balances may be settled at the Federal Reserve Bank. A member bank may join the county clearing arrangements in another county. Similarly many city clearing houses settle their balances immediately on the books of the Reserve Banks.

Cause of Exchange Charge Removed.—As we have seen, the exchange charge, formerly made by many banks in paying their own checks, was made on the theory that it cost a banker something to pay his out-of-town checks, either in the shipment of currency or in maintaining out-of-town balances. The occasion for such exchange charges has now disappeared. It no longer costs the banker whose checks go through the Federal Reserve collection system anything extra to pay his checks from out of town, because these checks are presented through the nearest Federal Reserve Bank, or branch, and not from a distance. He now has to make payment not at a distant point but at the nearest Federal Reserve office, and the Reserve Bank pays the cost of all currency shipments.

It is thus logical that under the law the Federal Reserve System can accept and collect only checks payable at par, without exchange deduction. This elimination of exchange charges for most of the country's checks removes one of the principal causes of delay in collection.

Time Saved.—The Federal Reserve System saves time in collecting out-of-town checks in three principal ways: (a) systematic and wholesale routing; (b) elimination of the indirect routing which formerly prevailed to escape exchange charges; (c) telegraphic settlement between Reserve Banks. The time for collecting checks under the Federal Reserve System varies from one day in the case of nearby cities, where there are Reserve Banks and branches, and where checks are presented at the local clearing house, to ~~eight~~ THREE business days in the case of the most distant transcontinental points. In general, the time required to collect checks has been cut in half.

Money Saved.—The Federal Reserve collection system saves money for banks and business by: (a) reducing the number of times checks have to be handled; (b) reducing the amount and distance of currency shipments, and the number of out-of-town drafts; (c) reducing interbank balances for collection purposes; (d) by itself absorbing costs of check handling and currency shipments.

There is no way of computing accurately the saving to the country from the operations of the system, because the saving reaches all the way from the small country bank to the large city bank, and from the small business man or farmer to the large industrial enterprise. The total is certainly many millions of dollars a year.

There is similarly no way of knowing just how the benefits of the system have been divided between banks and their customers, because banking customs differ so widely in different parts of the country. Certain of the savings to customers are perhaps more direct and obvious than the savings to banks. The Peter Browns who sell hardware and other merchandise in all parts of the country no longer have to buy drafts or keep accounts in the large cities to pay their out-of-town bills.

Except in rare cases wholesale houses no longer suffer the deduction of exchange charges when they collect their out-of-town checks.

The interest (or collection) charges which business men pay their banks for advancing the amount of out-of-town checks while they are being collected have been much reduced because the time of collection has been shortened. Only a few clearing houses now require banks in their membership to make charges of this sort. Loss through non-payment has been reduced because checks are presented more rapidly and notification of non-payment is received more rapidly. All these are direct and obvious money benefits to business resulting from the Federal Reserve collection system.

To the extent that banks used to absorb the cost represented by exchange and interest charges they have been direct gainers from the present system. But most of the benefits to banks have been somewhat less obvious and direct, such as a reduction in risk of loss because of the shortened time of collection, reduced clerical labor in handling and accounting for checks, reduction in the amount of currency shipments and payment of costs of such shipments by the Reserve Banks, and reduction in the number and amount of out-of-town bank accounts. Perhaps the most important benefit is that the country check has become an acceptable means of payment for out-of-town bills. The country bank can now offer its customers checking facilities which before could only be offered by the city bank. The country bank can, therefore, retain deposits which before would have been diverted to cities.

Every new invention and every forward step in industrial and social evolution has brought with it necessary readjustments. When the cotton gin was invented, it temporarily threw many out of work. So the typewriter and the adding machine made shifts in occupations necessary. The linotype forced many a typesetter to learn practically a new trade or be out of a job. When the National Bank Act taxed state bank notes out of existence, it deprived the state banks of a profitable business. When the city clearing house was introduced,

a number of banks, as we have seen in the case of New York City, were not able to adjust their operations to the new scheme.

The establishment of the Federal Reserve collection system, based on par payment, has made radical changes in this phase of banking, but the banks of the country have adjusted themselves to the changed conditions with remarkable rapidity. Following a period of experimentation, the collection system in its present form was inaugurated in July, 1916. Today, it is estimated that 98 per cent of the checks drawn in the United

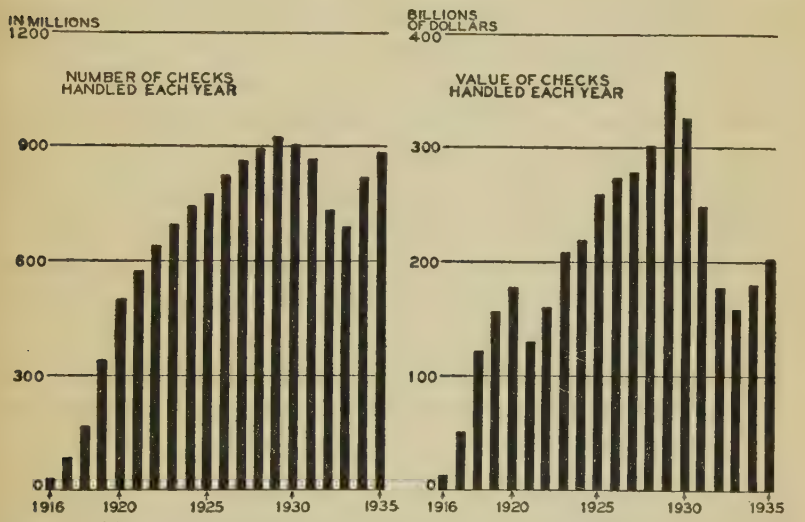


DIAGRAM 14—THE NUMBER AND DOLLAR VOLUME OF CHECKS HANDLED BY THE FEDERAL RESERVE COLLECTION SYSTEM.

States are payable at par through the Federal Reserve System. The Reserve System now handles for collection probably 95 per cent of all out-of-town checks. The twelve Reserve Banks handle over 2½ million checks a day for collection, with a value of over 600 million dollars. The total value of checks collected each year is well over 175 billion dollars, an amount equal to about four times the country's total commercial bank deposits. This work is done without charge, and checks are collected in about half the time it took under the old plan.

While most of the banks in the country have cheerfully assisted in the development of the Federal Reserve check-collection system and have been willing, for the sake of the other advantages they enjoyed, to pay their checks at par and give up the charging of exchange, there have been some small banks, particularly in country districts in the South and West, which have resisted the present plan or have not been able to satisfy the requirements of the System for the prompt payment of checks drawn on them. These few banks have continued to charge exchange, and their checks, therefore, cannot be handled by the Federal Reserve Banks, because the law provides that "no such charges shall be made against the Federal reserve banks." Checks drawn upon these banks are still handled by the old haphazard methods.

At one time when the check-collection system was being introduced the Reserve Banks made a vigorous effort to bring some of the recalcitrant banks into the par system. When banks would not remit at par for checks sent to them by mail, the Reserve Banks proceeded through local agents to present checks over the counters of these banks, thus requiring settlement without deduction of exchange. Some of the banks objected vigorously to this practice, and litigation was instituted both by these banks and also by some of the banks which were paying their checks at par. The history of these suits, involving as they did many technicalities of interpretation of banking practice and of law, has no place in this book. Several of the cases were carried to the United States Supreme Court. In brief, the result was that the Federal Reserve par collection system was upheld in its entirety, even to the right of the Reserve Banks to present checks over the counter for collection when banks would not remit at par by mail. In view, however, of the small number of banks not remitting at par, and the opposition aroused in forcing par payment by counter presentation, the Reserve Banks have discontinued that practice and do not handle for collection checks drawn on banks which charge exchange. It is believed that the importance to the bank customer of having his bank use the Federal Re-

serve collection system will in time make it essential for all banks to remit at par and enjoy the advantages of the nation-wide collection system.

Collection of Notes, Drafts, and Coupons.—In addition to the collection of checks the Reserve Banks provide facilities to the member banks for collecting what are known to bankers as "non-cash items," which include notes, drafts, and bills of exchange, and coupons of corporations and municipalities. The mechanism for handling these collections is not unlike that for checks except that credit is given to the member bank offering these items for collection only when payment has actually been received by the Reserve Bank. The volume of this sort of operation is indicated by the following figures.

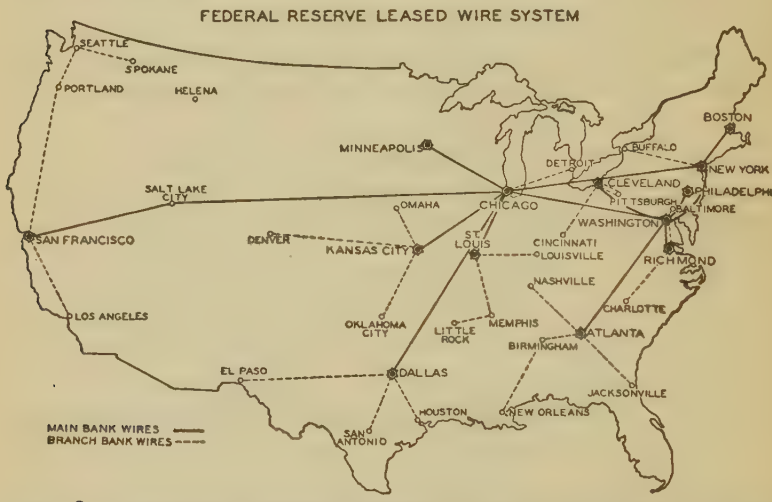
TABLE 14.—NON-CASH COLLECTION ITEMS

(In thousands)

Year	Number of Items Handled		Amounts Handled	
	U. S. Govt. Coupons Paid	All Other	U. S. Govt. Coupons Paid	All Other
1921	98,501	3,575	$772,330	$4,267,651
1922	81,694	4,722	759,124	4,768,971
1923	64,662	5,732	761,731	5,900,520
1924	50,471	6,113	719,784	5,509,093
1925	44,174	5,467	680,921	6,116,958
1926	39,678	5,595	644,273	6,219,361
1927	37,045	5,909	553,703	6,710,317
1928	28,765	6,461	543,373	7,414,440
1929	20,935	6,504	535,612	7,185,384
1930	19,362	6,388	499,111	7,528,014
1931	17,322	6,927	479,960	7,321,814
1932	17,710	7,468	529,086	5,427,817
1933	18,099	8,371	578,082	5,539,659
1934	21,555	7,436	699,325	6,742,974
1935	22,633	7,119	751,916	7,948,641

Wire Transfer of Funds.—Along with the development of the Federal Reserve check-collection system has gone the development of a system for transferring funds by wire more rapidly and at smaller cost than before the Reserve System was established. What the check-collection system has done for settlements by check the wire transfer system has done for telegraphic settlements.

Before the wire transfer system a man in Chicago having a bill to pay immediately in New York would usually buy



MAP 2—THE FEDERAL RESERVE TELEGRAPH-TRANSFER SYSTEM PROVIDES A RAPID FLOW OF FUNDS ABOUT THE COUNTRY. BOOKKEEPING BY TELEGRAPH LARGELY REPLACES CURRENCY SHIPMENTS.

"New York exchange," in just the same way as a New York merchant buys London exchange in the course of overseas trade. Domestic exchange was subject to many of the rules that govern the foreign exchanges; it fluctuated, was bought and sold, and registered the ebb and flow of business currents. Often, as in the foreign exchanges, the shipment of gold or currency was required to settle net balances of payments between different parts of the country. These shipments were expensive and subject to the hazards of transportation. There was a normal seasonal movement toward the West in the autumn, when the crops were being harvested, and a flow back to New York in the winter, when goods were being paid

for and investments made. All of this was expensive, not only because of the cost of shipment and insurance, but because of the unproductivity of funds while in transit.

Under the Federal Reserve System shipments of gold and currency for the purpose of settling balances have been almost wholly eliminated. While writers still describe movements and transfers of funds quite as if shipments were being made, they refer to transfers accomplished instantly and at par over the wires of the Federal Reserve System. Physical shipments are now practically restricted to the supplying of hand-to-hand currency for use as till money to member banks by their Reserve Banks and to the return to the Reserve Banks of such currency as is not needed by the business of the country.

The mechanism of wire transfers through the Reserve System is that the X bank in New York, for example, wishing to transfer $1,000,000 to the Y bank in Chicago, advises the Federal Reserve Bank of New York. The following steps are taken:

1. The New York Reserve Bank telegraphs the Chicago Reserve Bank and simultaneously debits the reserve account of the X bank $1,000,000.
2. A few minutes later the Chicago Reserve Bank credits the reserve account of the Y bank $1,000,000 and notifies the bank, which may use the funds immediately.
3. At the end of the day the New York and Chicago Reserve Banks report to the Board of Governors in Washington the total debits or credits resulting from their operations with each other and settlement is made by changes in the ownership of the inter-district settlement fund.

The general principle of wire transfers is thus similar to the principle of check collection through the Reserve System. The various offices of the System in all parts of the country, with their well-developed means of communication and their plan for daily settlement of accounts through the inter-district settlement fund, provide a ready channel for the rapid movement of bank funds about the country.

Transfers of member bank balances in round amounts are

handled free of charge over the leased wires, but transfers for member banks for the accounts of other banks, individuals, firms, or corporations are made over commercial wires, for which there is a charge to cover the cost of the telegram. Such transfers may be for any purpose or for any amount. The volume of wire transfers made by the twelve Reserve Banks has grown to an enormous business, as may be illustrated by the following figures for transfers made each year by the Federal Reserve Bank of New York alone.

TABLE 15.—WIRE TRANSFERS MADE BY THE FEDERAL RESERVE BANK OF NEW YORK

(In thousands)

	Number of Transfers	Amount of Transfers
1917.....	10	$ 6,768,000
1918.....	39	19,384,000
1919.....	84	18,365,000
1920.....	154	17,410,000
1921.....	215	18,160,000
1922.....	236	25,126,000
1923.....	284	28,032,000
1924.....	293	35,183,000
1925.....	294	38,821,000
1926.....	329	44,392,000
1927.....	355	50,898,108
1928.....	402	55,469,947
1929.....	445	67,426,244
1930.....	412	73,520,472
1931.....	375	62,189,715
1932.....	341	49,476,304
1933.....	307	37,289,786
1934.....	271	28,642,418
1935.....	255	31,061,836

SUMMARY

1. Three important steps in the evolution of means of payment in the United States have been the standardization of coinage, the standardization of paper money, and the development of systematic methods for check collection.

2. What the clearing house did for city checks the Federal Reserve System has done for out-of-town checks in providing a means of systematic handling and thus reducing expense, delay, and risk in collections.
3. The Reserve System with its twelve banks and twenty-five branches provides a mechanism for the expeditious routing and collection of checks, and remittance time is shortened by telegraphic book settlements through the inter-district settlement fund.
4. Since the Reserve Banks now make settlements between distant points there is no more occasion for the "exchange charge" which banks used to make in paying their own checks presented from a distance.
5. Since the Reserve System has cut in half the time required to collect checks, it has greatly reduced the "interest charge" which some banks make for the use of funds represented by uncollected checks.
6. Savings to business men and bankers from the Federal Reserve check-collection system include:
   - Reduction in number of times checks have to be handled, through more direct routing.
   - Reduction in the credit risk by speeding up check collections.
   - Reduction in amount and distance of currency shipments.
   - Reduction in interbank balances for collection purposes.
   - Reduction in need for purchase of special bank drafts.
7. Under the present plan the check on the country bank has become as acceptable a means of payment as the check on the city bank.
8. The banks of the country have adjusted themselves rapidly to the improved check-collection mechanism, and 98 per cent of the checks drawn in the United States are now payable at par through the Federal Reserve System.
9. The Federal Reserve private wire system and inter-district settlement fund are also used for transferring funds between all parts of the country, with large saving of expense and inconvenience.

CHAPTER VII

Bankers for the Government

THE United States Government is the largest customer of the Federal Reserve Banks. One sentence of the Federal Reserve Act provides that the Reserve Banks "when required by the Secretary of the Treasury shall act as fiscal agents of the United States, and the revenues of the government or any part thereof may be deposited in such banks, and disbursements may be made by checks drawn against such deposits."[1] The volume and type of Treasury operations with the Reserve Banks are illustrated by Table 16, on page 107, showing the debits and credits to Treasury account at the Federal Reserve Bank of New York for the month of March, 1935. The nature of the transactions may be gathered by running one's eye down the items listed in this table.

It will be noted that the total volume of operations as indicated by the total debits, together with the total credits, was between three and four billion dollars. These operations, which were handled in New York, constitute in general from one-third to one-half of the total operations performed for the Treasury by all twelve Federal Reserve Banks.

The largest items in the table have to do with the issuance or redemption of government securities. The Federal Reserve Banks are the Treasury's agents in the distribution of its securities. Before an issue of government securities is sold its terms are discussed with the officers of the Federal Reserve Banks, who maintain contacts with the dealers, the banks, and other buyers of government securities in order to interpret changes in market conditions to the Treasury. Each new issue, in addition to press statements by the Secretary of the Treasury, is announced through the Federal Reserve Banks, which send out circulars describing the issues to member and non-

[1] Section 15 of the Federal Reserve Act.

TABLE 16.—TREASURER'S ACCOUNT, SECOND FEDERAL RESERVE DISTRICT—MONTH OF MARCH, 1935

Debits	
Checks and warrants paid	$ 126,735,000
Coupons paid	34,692,000
Funds transferred from New York	122,022,000
Securities purchased	58,134,000
Federal Land Bank bonds redeemed	604,000
Fourth Liberty Loan bonds redeemed	181,000
Philippine Islands bonds redeemed	111,000
Treasury bills redeemed	247,226,000
Treasury notes redeemed	3,254,000
Other U. S. securities redeemed	1,612,000
Treasury notes exchanged	315,786,000
Fourth Liberty Loan bonds exchanged	860,275,000
Interest adjustment on above exchange	14,647,000
Discount on Treasury bills issued	313,000
Miscellaneous accounts	174,000
Total debits	$1,785,766,000

Credits	
Funds transferred to New York	$ 63,300,000
Income taxes	110,451,000
Internal revenue and customs receipts	84,540,000
Post office receipts	27,385,000
Collections	6,213,000
To retire circulation	107,165,000
Deposited by Army and Navy	1,220,000
Payments for the account of Reconstruction Finance Corporation	7,817,000
Deposits for the account of Home Owners' Loan Corporation	2,581,000
Securities sold	9,228,000
Sales—account of Postal Savings	231,000
Treasury bills issued	364,065,000
Treasury notes issued	315,786,000
Treasury bonds issued in exchange for Fourth Liberty Loan bonds	860,275,000
Interest adjustment on above exchange	1,026,000
Miscellaneous accounts	498,000
Total credits	$1,961,781,000

member banks and others who may be interested. The subscriptions are received at the Reserve Banks and the securities are finally delivered at their offices. Similarly the Reserve Banks act as agents for the Treasury in paying off maturing obligations, and cash the interest coupons which are presented to them for payment, largely by member banks.

In addition the Reserve Banks perform many ordinary banking operations for the Treasury. Treasury checks in payment for salaries, pensions, war risk insurance, relief, public works, or other Treasury disbursements are payable at any one of the twelve Federal Reserve Banks or their branches. The commercial banks with which such checks are deposited present them at the Reserve Banks for payment. These checks come through in enormous volume. The government check division of the Federal Reserve Bank of New York, for example, handles about 44,000 government checks each day with an average value in the neighborhood of nine million dollars.

The agencies for fighting the depression, such as the Reconstruction Finance Corporation, Home Owners' Loan Corporation, and other similar agencies, use the Federal Reserve Banks as fiscal agents in much the same way as the Treasury does. For example, the collateral taken by the Reconstruction Finance Corporation in connection with loans made to banks or to others has been lodged with the Federal Reserve Banks for safekeeping, and the Reserve Banks have made payments to the borrowers on instructions from the Reconstruction Finance Corporation. Checks for relief and public works are paid through the Reserve Banks. Work for the emergency agencies has largely increased the volume of operations of the Reserve System.

There are other routine jobs. The Reserve Banks transfer funds back and forth across the country to the points where they are needed by the Treasury. They receive on deposit income taxes, customs, and miscellaneous internal revenue taxes. They buy and sell securities in the market for various Treasury accounts. They hold in safekeeping for the Treasury large amounts of securities including amounts unissued.

Most of the other items in the summary table of March transactions with the Treasury do not require explanation in detail. The table clearly indicates the wide range and the large volume of operations which are carried forward by the Reserve Banks in their capacity as bankers for the government. There are still further activities, which do not appear in Table 16 including the exchange or transfer of registered and coupon securities; the holding in safekeeping of securities; and the operation of a system for the telegraphic transfer of short-term government securities. An interesting fact which the table only partly reveals is that regularly more money is raised in New York through taxes and the sale of securities than is spent there. The resulting balances are gradually piped off to be spent in other parts of the country. This movement of Treasury funds away from New York is about offset by a movement of commercial funds to New York.

An analysis of the personnel and expenditures of the Federal Reserve Bank of New York indicates that out of a total clerical staff of about 2,400 people the full time of about 300 is now employed in handling banking transactions for the United States Government. An analysis of the expense account shows that about 10 per cent of the bank's entire expenses, or in the neighborhood of $800,000 a year, is fairly chargeable to Treasury banking business. For all the Federal Reserve Banks the number of workers handling such transactions is about 2,400 and the annual expense is probably over five million dollars.

Some years ago the Federal Reserve Banks were reimbursed by the Treasury for most of this expenditure, but since 1921 they have been reimbursed only for certain specified expenditures in connection with new security issues, the Reconstruction Finance Corporation, and other agencies; and about half the work done for the Treasury is done without charge.

With all its vast turnover of funds, amounting for the System as a whole to several billion dollars a month, the Treasury Department has in recent years carried an average balance with the Reserve Banks of about 80 million dollars. This is a smaller balance than is carried by some of the large member

banks as reserves. Just in the past few months the Treasury balance has been considerably larger.

Earlier Experiments.—Not only in this country, but in foreign countries as well, the problem of the relationship between the state and the money market has been extremely troublesome. It cannot be settled by complete separation as was the problem of the state and religion, for it is impossible to draw a line of cleavage between the state and the money market so long as the state must raise revenue and pay bills.

In this country divorcing state finance from the money market has been tried. After some preliminary experiments during the first half of the nineteenth century in various forms of government banking practice, and when some organized system was found to be essential after the Second Bank of the United States had been discontinued, a plan was set up in 1846 called the Independent Treasury System and designed to separate state finance from the money market as completely as possible. The government decided that it would be its own banker and have nothing to do with the privately organized banking institutions of the country. Government banking offices were set up in the four cities of New York, Boston, Charleston, and St. Louis, to which Philadelphia, Baltimore, New Orleans, San Francisco, Cincinnati, and Chicago were added, and at those offices the government collected revenues and paid its bills. Under this system revenues had to be paid in specie, and disbursements were likewise made in specie. Government balances were locked up in cash.

The history of the succeeding sixty years is a record of the gradual breakdown of the Independent Treasury System. The scheme could not endure. It received its first serious setback at the outset of the Civil War, when the attempt to collect in specie the funds which the Treasury required to conduct the war immediately forced private banks to suspend specie payment. Some way out had to be discovered before the conclusion of the war, and the result was the establishment of the National Banking System, which proved itself, according to Hugh McCulloch, Secretary of the Treasury at the conclusion of the war, "a vast improvement upon the sys-

tems which it superseded, and one admirably adapted to our peculiar form of government."[2] The national banks aided the government greatly in floating war issues and generally handling the nation's funds. Before the end of the war a substantial part of the Treasury balance was maintained on deposit with the national banks.

Relations with the Money Market.—From that time forward the Treasury was no longer completely isolated, but certain of its funds were continuously on deposit with the national banks. The proportion of the Treasury funds so deposited varied greatly from time to time. Each succeeding Secretary of the Treasury had his own views as to the propriety of these deposits under the Independent Treasury law, and the amount of deposits reflected these varying views. Diagram 15 shows over a long period of years where the Treasury's balances were deposited on June 30 of each year. The changes in these figures are important because under the scheme which existed up to the time of the establishment of the Federal Reserve System all balances held by the Treasury itself and not placed in depositary banks represented coin or currency withdrawn from circulation or from the reserves of the banks. In the Independent Treasury we had an agency which from time to time drew money out of the market or poured money into it, often without due regard to the effect of this action on the money market. In judging the effects of this action it should be noted that the funds so withdrawn from the market or poured into it represented reserve funds —that is, they were specie or currency. Later, taxes might be paid by check, but the effect was similar when the Treasury received payment for these checks from banks—reserves were drawn from the banks. And the effect on the credit situation of changing the volume of reserve funds is greater than the effect of changing ordinary bank deposits. In studying the diagram it should be noted that very large balances in the Treasury in 1934 and 1935 include part of the free gold in the Treasury resulting from devaluation of the dollar, and do not represent a locking up of funds withdrawn from the mar-

[2] *Annual Report,* Secretary of the Treasury, 1866, p. 16.

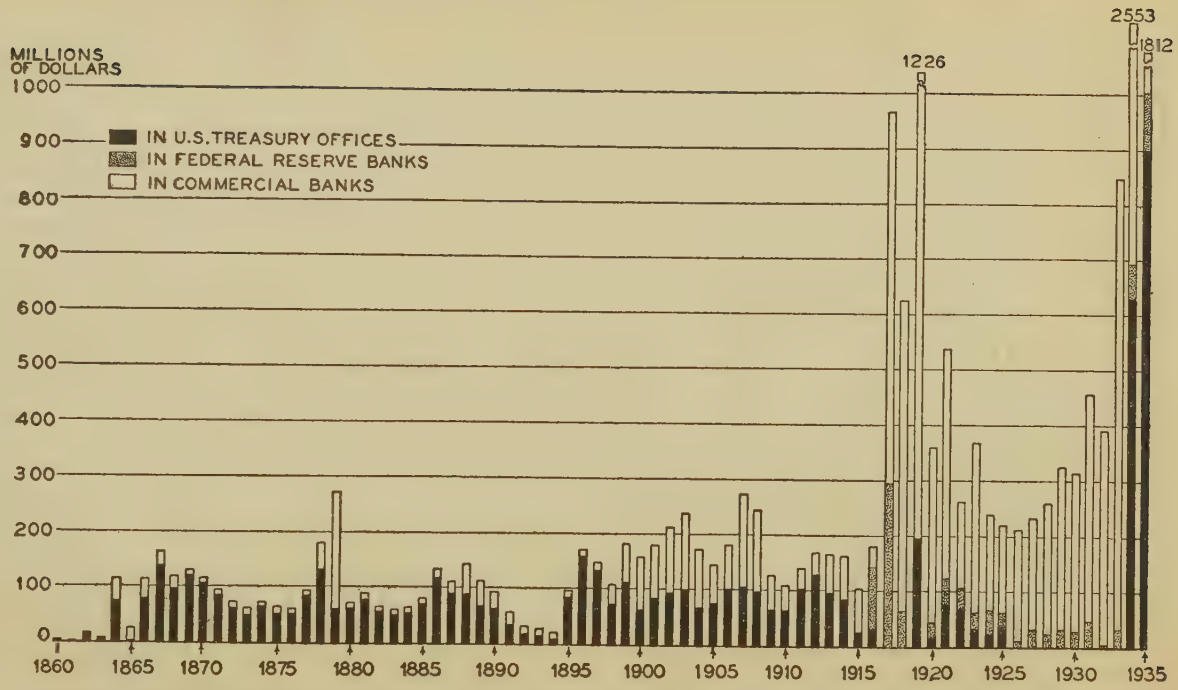


DIAGRAM 15—BALANCES IN GENERAL FUND OF THE TREASURY, JUNE 30 OF EACH YEAR. UNDER THE RESERVE SYSTEM BALANCES IN THE GENERAL FUND OF THE TREASURY HAVE BEEN LARGELY KEPT IN COMMERCIAL BANKS WHERE THEY ARE AVAILABLE FOR THE USE OF BUSINESS, INSTEAD OF BEING LOCKED UP IN TREASURY OFFICES.

ket. In certain recent years the excess of reserves in the banks has been so large that the building up of balances in the Treasury or Reserve Banks would have little effect on money conditions but that was seldom true in the past.

When the National Monetary Commission made its report in 1911 it included an analysis by Professor David Kinley, of the University of Illinois, of the effects on banking and the money market of the Independent Treasury System.[3] In a statistical study Professor Kinley demonstrated how the changes in the balances held by the Treasury Department in its own vaults were immediately effective in lowering or raising the available reserve funds of banks and hence tended to result in abrupt changes in money-market conditions.

We find in the reports of a number of Secretaries of the Treasury, going back over the years of the Independent Treasury, a recognition that the system was placing upon the Treasury Department great responsibility with respect to the money market. The Treasury was forced into the position of assuming certain functions of a bank of issue. Even as early as 1866, the Secretary of the Treasury, in discussing in his annual report the course he had pursued with regard to the gold in the vaults of the Treasury, said:

> He has permitted it to accumulate when the use or the sale of it was not necessary for paying government obligations, or to prevent commercial panics, or successful combinations against national credit; and he has sold whenever sales were necessary to supply the Treasury with currency, to ward off financial crises, or to save the paper circulation of the country as far as practicable from unnecessary and damaging depreciation. For making sales he alone is responsible.[4]

In the reports of the Treasury we frequently find phrases like the following, quoted from the report of the Treasurer for the year 1879:

[3] David Kinley, "The Independent Treasury of the United States and Its Relations to the Banks of the Country," Publications of the National Monetary Commission, vol. VII, 1911 (U. S. Senate, 61st Congress, 2nd Sess., Doc. No. 587).

[4] *Report of the Secretary of the Treasury on the State of the Finances for the Year 1866,* p. 10.

It is becoming apparent that should the withdrawal of money continue the market would be affected unfavorably . . .[5]

Forced to be Financial Dictator.—It was in periods of financial crises that the Treasury Department was most frequently forced to assume the role of financial dictator. The Treasury came to the rescue of the money market by depositing Treasury funds in banks, buying government securities in the market, or anticipating interest payments on the debt in practically every one of the important financial crises. It was at times the regular practice of the Treasury to put money out in the fall when credit demands were greatest, and draw it in again in the early winter.

There are many difficulties with this type of dependence of the money market on the Treasury for support. The Secretary of the Treasury is one of the President's political family and policies change with each change of administration. The Secretary, moreover, had a dual responsibility. His primary task was to administer government finance with regard to the provisions of the law and with the maximum of economy and efficiency. To the extent that his decisions were based on these motives, the effects of his action on the money market tended to be subordinate and secondary. Moreover, as a politically appointed officer, the Secretary of the Treasury was under constant criticism in dealing with individual depositary banks; banks were always bringing to bear political pressure to obtain deposits and the cry of favoritism, of "pet banks," was constantly raised.

To the credit of our Secretaries of the Treasury it must be said that under these difficulties, and working under the restrictions to which all government departments are subject, their record is surprisingly good. The trouble was more with the machinery than with the operators.

Middleman Needed.—What was needed was a middleman between the Treasury Department and the banks of the country, a thoroughly trustworthy agent without political affiliations and with permanent tenure, in close contact with the

[5] *Report of the Secretary of the Treasury on the State of Finances for the Year 1879;* report of the Treasurer, p. 340.

money market but not engaged in money-making. This is what the Federal Reserve System provided. The Reserve Banks are not government banks because all of their stock is owned by the member banks and the directors represent varied interests. At the same time the public interest is specifically guarded. The Reserve System is removed by the terms of its basic legislation from those profit-making motives which must necessarily determine the activities of private banks.

A Typical Instance.—The way in which the Reserve System carries through large financial operations for the government without serious disturbance to the money market may be illustrated by quoting from the *Monthly Review* of the Federal Reserve Bank of New York for April 1, 1927, the account of the quarterly tax day operations on and following March 15, 1927. At two or three points explanatory phrases have been added to the account.

This illustration is used rather than a more recent one because in recent years huge excess reserves have distorted the relationship between the Reserve Banks and the money market.

Treasury transactions for the country as a whole included the redemption of $660,000,000 of Treasury notes, the largest maturity in some years; the issuance of two new series of certificates of indebtedness, $170,000,000 at 3⅛ per cent for six months, and $314,000,000 at 3¼ per cent for one year; the issuance of $1,355,000,000 of Treasury 3½ per cent three to five-year notes in exchange for Second Converted 4¼ per cent Liberty Loan bonds, redeemed with interest to May 15, 1927; the payment of $90,000,000 of interest; the withdrawal of $192,000,000 of government deposits from depositary banks; and the receipt of over $500,000,000 of income taxes. The total turnover of government funds on and about March 15 was well over 3 billion dollars. Much of this, particularly the collection of income taxes, was spread over a number of days and distributed about the country. The first day of the tax period, the 15th of the month, is always the heaviest day, however, and in all such operations between one-third and one-half of all transactions take place in New York. As a consequence, the volume of operations of the New York Reserve Bank on March 15 was one of the largest for any day in its history. The total turnover of funds on that single day, including both transactions for Treas-

ury account and ordinary banking operations, was close to 2 billion dollars. This total was made up roughly as follows:

Fiscal Agency Operations	
Securities redeemed	$ 343,000,000
Securities exchanged	548,000,000
Subscriptions to new issues	136,000,000
Interest paid	32,000,000
Income taxes collected	8,000,000
Total	$1,067,000,000
Banking Operations	
Checks and other collections	$ 530,000,000
Wire transfers	243,000,000
Currency payments and receipts	28,000,000
New loans to member banks	10,000,000
Member bank loans paid	75,000,000
Total	$ 886,000,000
Total, all operations	$1,953,000,000

Certain of these very large Treasury operations have no effect on the money market beyond some churning about of funds. They do not involve any gain to the money market or any loss to the market. The exchange of 3½ per cent notes for Second Liberty 4¼'s, for example, neither withdraws funds from the market nor puts funds into the market. Similarly, the issue of new certificates does not affect the money market, since these certificates are largely paid for by deposit credit to the account of the government on the books of the subscribing banks, and there is no withdrawal of funds until the Treasury from time to time makes calls upon these deposits as it has need for funds. The Treasury operations which did exercise an important effect upon the money market were the redemption of maturing notes, the payment of interest, the call of funds from depositary banks, and the collection of income taxes.

The immediate effect of Treasury operations on March 15 was to pour into the money market about 265 million dollars of funds, because payments by the Treasury to redeem maturing notes and to pay interest were immediately available, whereas the actual collection of income-tax checks by the Treasury was spread over a number of days. (The Treasury obtained the funds to meet this

large excess of payments over receipts by selling the Reserve Bank a one-day special certificate of indebtedness which was renewed in reduced amounts for several succeeding days.)[6] The money-market problem, in which the Federal Reserve Bank was concerned, was to prevent this huge gain in funds by the market on March 15 from upsetting the market. The extra funds put into the market by the Treasury were absorbed in the following ways:

1. Member banks in New York City allowed their reserves to run below requirements for a few days prior to March 15, so that they came to March 15 with an accumulated deficiency of 85 million dollars.
2. On March 15, banks repaid the Reserve Bank 63 million dollars of loans.
3. In addition, 18 million dollars of Federal Reserve credit was retired through decreases in holdings of bills and government securities under sales contract.
4. The Reserve Bank made a temporary sale of 60 million dollars of government securities to several member banks.
5. Maturities of $25,000,000 of securities from the System's holdings were not replaced until the following week.

By these means the greater part of the 265 millions of excess funds was withdrawn from the market and as a consequence there was no serious overage of funds in the market. Money rates in the stock exchange market only went below 4 per cent for a few hours on March 16; on March 17 and 18 (as income-tax checks were collected) the member banks resold to the Reserve Bank the securities they had purchased, and on March 18 they found it necessary to borrow 117 million dollars from the Reserve Bank to bring their average reserves up to requirements. Thus money conditions were maintained at a stable level during the week.

The Reserve Bank's temporary sale of government securities to the member banks was of interest partly because it took a new form. Temporary sales of securities have frequently been made in the past at tax periods to prevent unduly easy money, but such sales have usually been made from the securities in the System's open market account, which are lodged in New York. The sale during the March tax period took the form of the sale of participations in the special one-day certificates of indebtedness, which the

[6] It should be noted that the Banking Act of 1935 prohibited the Reserve Banks from buying government securities except in the open market and hence prohibited them from making advances to the Treasury. The technique for handling quarter-day operations will therefore have to be somewhat modified in the future. There is nothing to prevent the sale of special Treasury certificates directly to member banks, negotiated by the Reserve Banks.

Treasury issued to the New York Bank to cover the funds which it borrowed from the New York Bank to meet its temporary excess of expenditures over receipts.

A complete picture of all shifts in funds between the Federal Reserve Bank and the market during such a time as the tax period would require more space than this chapter allows. This outline sketch indicates the way in which the intimate relation between the Federal Reserve country-wide mechanism and the money markets of the country, together with the power of the Reserve Banks to extend additional credit when necessary, provides a mechanism by which the Treasury may carry out its operations with the money market smoothly and effectively and without disturbance.

War Service.—One reason for giving such a detailed account of quarterly tax-day operations is that these operations are typical of the procedure which was followed in carrying through the vast amount of war financing. During the war the sale of Liberty bonds and Victory notes and of short-term certificates of indebtedness was organized through the Reserve Banks, and these banks handled the proceeds and paid them out again from time to time at the direction of the government. It was the power of the Federal Reserve Banks to extend credit which enabled member banks, and through them the public, to subscribe as they did to the war loan issues.

These things are all a matter of recent record and vivid memory, and it is perhaps only important to point out here the fact that these huge operations were carried forward without any disorganization of the money market. The secret of the smoothness with which they were conducted was that funds were never allowed to pile up in the Federal Reserve Banks or the Treasury, but were only called in to be paid out immediately. When banks made payments for Liberty bonds, these payments took the form of deposit entries on their own books to the credit of the Federal Reserve Banks as fiscal agents of the Treasury. The banks lodged securities with the Reserve Banks as collateral for these deposits. When individuals bought bonds, the operation was in the main simply

a transfer of deposits on the books of the banks from the accounts of customers to the account of the Treasury. The government drew down its balance only as the funds were needed to be paid out, and by these payments for services, munitions of war, loans to the Allies, etc., it created new balances to the accounts of bank customers. Back of all these operations stood the Federal Reserve Banks ready to make advances to the member banks whenever necessary.

A second principle which was important in maintaining stability in the money market during and after the war was that, except for a single three months' loan of $50,000,000 in April, 1917, and for occasional issues of special certificates of indebtedness outstanding only a few days, the Treasury, to its credit, did not borrow directly from the Reserve Banks. To the extent that Federal Reserve credit was required to finance the war, it was created by borrowing on the part of member banks, with the obligation which that involved for the eventual return of the loan, or it took the form of open-market purchases by the Reserve Banks of commercial obligations which were salable in the open market. The Reserve Banks were thus in a position at all times to exercise an influence toward stability.

This principle of independence of the Reserve Banks from direct Treasury borrowing was a sound principle to follow. Its soundness was emphasized by the troubles that overtook certain of the European banks of issue, which found themselves after the war under government domination and out of contact with the money market.

It is illuminating to try to visualize what the situation would have been if the Treasury had borrowed directly from the Federal Reserve Banks. Suppose that in 1920 at the maximum three billion dollars of the total of the nearly 3½ billion dollars of credit extended by the Reserve Banks had been lent directly to the Treasury instead of to the member banks. Would the Treasury have repaid the Reserve Banks rapidly enough to avoid continued serious inflation? Treasury repayments would have depended upon the Treasury budget and political decisions, rather than on the needs of the country

for credit. There would have been every temptation to consider borrowings from the Reserve Banks as a more or less permanent part of the national debt. The Reserve System might have been drawn into a maelstrom of dispute and controversy which might have wrecked it, and war-time credit expansion might have proved almost impossible to check.

The principle that was followed, of not lending directly to the Treasury but lending to banks, resulted in a semi-automatic liquidation of Reserve Bank credit as prices fell and gold was imported. The banks used all surplus funds to pay off their indebtedness, and the volume of Reserve Bank credit was adapted to changes in credit requirements. Such a result would have been most difficult if not impossible if the debt had been owed by the government.

The importance during the war period of these principles which have just been outlined is realized most vividly when they are reviewed in connection with the figures for the size of the war financing. Its huge volume is summarized in Table 17.

Subtreasuries Taken Over.—When the Federal Reserve Banks first started operations, the Treasury continued to maintain Subtreasury offices in nine important cities. In succeeding years the mechanical functions of these offices were gradually transferred to the Federal Reserve Banks. During the years 1920 and 1921, by Act of Congress, the remaining Subtreasury functions were taken over by the Reserve Banks and the Subtreasuries were closed. As a result of this action and the more recent provision for the retirement of national bank notes the Federal Reserve Banks have become the only sources of supply for coin and currency, outside Washington. Thus all but a small fraction of the total money in circulation is distributed through the Federal Reserve Banks. Old money is retired from circulation and new money is put out. The Treasury is saved not alone the expense of operating the Subtreasuries, but also the cost of carrying so large a working supply of coin and currency. The 37 offices of the Federal Reserve System provide a wider distribution of facilities for conducting this business.

TABLE 17.—TREASURY ISSUES SOLD OR EXCHANGED THROUGH FEDERAL RESERVE BANKS

(In millions of dollars)

Year	Liberty and Victory Loans	Treasury Bonds	Treasury Notes	Certificates of Indebtedness	Treasury Bills	Total
1917.....	5,797			3,881		9,678
1918.....	11,140			10,742		21,882
1919.....	4,495			11,247		15,742
1920.....				3,940		3,940
1921.....			702	2,910		3,612
1922.....		764	2,511	1,427		4,702
1923.....			1,035	1,264		2,299
1924.....		757		985		1,742
1925.....		290		1,048		1,338
1926.....		495		608		1,103
1927.....		495	1,980	1,419		3,894
1928.....		359	607	2,369		3,335
1929.....				1,782	100	1,882
1930.....				1,675	613	2,288
1931.....		2,216	600	2,236	1,859	6,911
1932.....			3,075	2,720	2,425	8,220
1933.....		2,236	1,828	2,570	3,726	10,360
1934.....		2,835	4,921	525	4,386	12,667
1935.....		4,039	4,322	0	3,956	12,317
Total...	21,432	14,486	21,581	53,348	17,065	127,912

Open Market for Treasury Obligations.—A further interesting service which the Federal Reserve Banks have been able to perform for the Treasury and for the money market lies in the aid they have given to the establishment of an open market for short-term Treasury issues in the form of certificates of indebtedness or Treasury notes or bills. During the war the Treasury found it imperative to finance in some organized way the temporary advances it required pending the receipt of taxes or the receipt of returns from Liberty

Loan sales. As a consequence, there were sold to banks and private investors short-term securities running for from one to twelve months.

As the war progressed it was necessary to issue larger and larger amounts of these securities and they began to accumulate in banks. To aid in a wider distribution steps were taken to establish an open market for them. Dealers were encouraged to buy and sell Treasury certificates and in so doing were given the support of the Federal Reserve Banks, which adopted a policy of standing ready to purchase Treasury certificates from dealers for short periods from time to time whenever the market became congested, or money rates rose to such high points that dealers could not obtain the call loans they required to carry their portfolios of certificates at rates approximating the rates borne by the certificates.

The way this worked out was that when call money rates were temporarily high, or when the supply of Treasury securities was much larger than the demand, dealers sold some of these securities to the Reserve Banks under an agreement to repurchase them within fifteen days. The dealers repurchased the securities as soon as the temporary condition was passed, usually well before fifteen days elapsed.

The establishment of this open market stimulated the use of Treasury short-term securities as means of employing surplus funds. The assurance of a ready sale enables banks and others to use Treasury obligations as secondary reserves, which may be liquidated whenever funds are required, and thus gives the Treasury a readier and more stable market for its obligations.

Relations in the Depression Emergency.—Just as the war gave rise to new relationships between the Treasury and the Reserve Banks, so the depression emergency created new conditions which led to further readjustments in Treasury-Federal Reserve relations, and to new services which the Reserve Banks were called on to perform as bankers for the Treasury.

The sale of Treasury obligations in the face of an unbalanced budget once more became a serious problem, and every few weeks representatives of the Reserve Banks were called

to Washington to advise with the Treasury on its financing program. The volume of operations in the sale of securities was again suggestive of war-time transactions.

The various credit agencies of the depression: Reconstruction Finance Corporation, Farm Credit Administration, Home Owners' Loan Corporation, etc., all required banking service in paying out funds, receiving and holding collateral, and issuing securities. These services the Reserve Banks undertook, and thus lifted their volume of operations by many hundreds of millions of dollars.

Another new relation with the Treasury resulted from the purchase by the Reserve Banks of large amounts of government securities. For reasons of policy which will be discussed later, but which may be summarized briefly as an effort to create such ample supplies of money as would tend to facilitate the repayment of debt and the checking of deflation and would tend to encourage greater freedom of lending by banks, the Reserve Banks purchased substantial amounts of government securities in each year from 1929 through 1933. By the end of 1933 the aggregate holdings amounted to nearly $2,500,000,000. This large purchase of government securities differed from war-time transactions described in earlier pages of this chapter in that these securities came to the Reserve Banks directly from the market in the form of outright purchases instead of coming in the form of discounts of member banks collateraled by government securities. The distinction is significant, for the government securities acquired in war time carried with them a semi-automatic means for their liquidation, as borrowing banks sought to pay off their debts. The large purchases of government's acquired more recently had no such safeguard. Their purchase was undertaken deliberately in order to meet a difficult situation, and to loosen a credit jam which was forcing on the country severe deflation. It is, however, recognized that large holdings of government securities by a central bank constitute a possible danger to its independence and its capacity to adjust itself rapidly to changing credit conditions. To use an extreme case as illustration, both the German and French inflations resulted technically from

the overloading of the central banks of those countries with government securities. If the Reserve System is to serve the best interests of the country and operate toward business and financial stability the System clearly must be ready, when the situation makes it necessary, to sell its government securities, even though the sale may react adversely on the government security market and on the cost of borrowing to the Treasury. The philosophy is the same as that set forth in previous pages in the discussion of war financing.

In considering this question it should be noted that all these securities were purchased in the market at market prices. They were not acquired by direct purchase from the Treasury. They were purchased as a matter of credit policy and not to aid the Treasury. That is after all the essential principle. Open-market purchases of government securities are a necessary function of a bank of issue, but it is essential that such purchases should be made only when they are justified as a matter of sound economics. The line between purchases made to improve the economic condition of the country and purchases made to meet the convenience of the government may often be difficult to draw; but if the central bank is genuinely free from undue political pressure, the distinction may be made.

Still further new relationships between the Treasury and the Reserve System were created by the passage in January, 1934, of the Gold Reserve Act of 1934 and the subsequent devaluation of the dollar. Under the terms of that Act the increase in the value of the country's gold stock arising from devaluation accrued to the United States Treasury. Of this sum two billion dollars was set aside, for two years and a possible third at the option of the President, recently exercised, as a Stabilization Fund. This fund might be used to deal in gold, silver, foreign exchange, and government securities under the exclusive control of the Secretary of the Treasury. The remaining balance from devaluation, 800 million dollars, was paid into the general fund of the Treasury and was likewise under the exclusive control of the Secretary of the Treasury. Through his power to deal with this large sum of gold,

this official was placed in a position to exert an enormous influence upon the money market and the credit situation. To a certain extent this action turned the pages of history back, and placed the Secretary of the Treasury in a position of responsibility for the credit situation somewhat similar to that which he had occupied under the Independent Treasury. Some powers to influence the credit situation the Treasury will always have, but recent legislation has increased these powers largely. If the Secretary exercises his powers coordinately with the Federal Reserve System, his action may give added effectiveness to Federal Reserve policy. If on the other hand at any time the two should pursue contrary courses, each would be able largely to offset and nullify the other's action. Here again is a situation carrying possibilities of danger. Such a division of responsibility for the country's monetary policy, however necessary in the emergency, is clearly undesirable as a matter of permanent organization. The same general philosophy applies to powers with respect to silver given to the Secretary of the Treasury by the Agricultural Adjustment Act as amended by the Gold Reserve Act of 1934 and the Silver Purchase Act of 1934, the details of which need not be discussed here.

In carrying through the operations of the Stabilization Fund and administering other acts and proclamations relating to gold, silver, and foreign exchange, the Federal Reserve Banks have acted as agents for the Treasury.

SUMMARY

1. The Reserve Banks provide a non-political, non-profit-making banking agency for the use of the government, with which the Treasury may deal without fear of accusation of favoritism.
2. It is an agency in constant contact with the money market, with offices in all parts of the country, and performs a huge volume of work for the Treasury at minimum cost.
3. The presence of the Reserve System relieves the Treasury of a direct responsibility for the money market which had proved difficult to fulfill. It is no longer necessary for the Treasury Department to make special deposits or pur-

chases of securities for the purpose of relieving business crises.

4. The presence of the Reserve System as a means for adjusting the volume of credit to business needs, not only relieves the Treasury from what had been one of its most onerous burdens, but provides in addition a credit reservoir which gives the Treasury greater assurance in finding a market for its obligations in emergencies. Direct advances to the Treasury have never been a general practice and are now forbidden by law.
5. During the war the Reserve Banks not only organized the sales campaign for Liberty bonds and Victory notes but provided the member banks with the additional credit necessary to finance the program.
6. The important principle maintained was that the Reserve Banks should lend to the member banks rather than directly to the Treasury. The desire of the banks to get out of debt ensured the retirement of this credit as promptly as possible.
7. The Reserve Banks have also aided in the establishment and maintenance of an open market for Treasury obligations.
8. The depression has led to a number of new relations with the Treasury. One of these arises from the purchase by the Reserve Banks in the market as a matter of monetary policy of over two billion dollars of government securities.
9. A second new relation arises from large new monetary powers placed in the hands of the Treasury through the possession of the two billion dollar Stabilization Fund. The Treasury thus has unusual powers of monetary control paralleling those of the Reserve System.
10. Upon both points an understanding cooperation between the Treasury and the Reserve System is necessary for the success of any monetary policy, because the two agencies have power to checkmate each other.

CHAPTER VIII

Supervision of Banking

THE preamble of the Federal Reserve Act reads as follows:

An Act To provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish *a more effective supervision of banking*[1] in the United States, and for other purposes.

Thus one of the purposes of the Federal Reserve Act was stated to be a more effective supervision of banking, and yet a careful examination of the original terms of the Act indicates that it gave the Reserve System only limited powers of that sort. While one might have supposed from this title, and many people have assumed, that the Federal Reserve System bore the sole or at least a major responsibility for bank supervision in the United States, this was not the case.

In the first place only national banks were required to join the Federal Reserve System though state banks might do so under certain conditions if they wished. What powers the Federal Reserve System had over banks related solely to member banks which have constituted only about one-third of the total number of banks in the country. The other two-thirds have been outside the jurisdiction of the Reserve System.[2]

Even over the member banks the powers of the Reserve System to supervise banking operations have been limited. The Comptroller of the Currency continued to be the legally constituted supervisory authority over national banks. He was charged by the law with the duty of granting new national banks charters, of examining all national banks, of endeavoring to correct faults which the examinations showed, and of

[1] Italics are the author's.

[2] Due to changes since the bank holiday, 42 per cent of the commercial banks are now members; 58 per cent nonmembers.

suspending banks when necessary. Similarly state banks were left under the supervisory power of the state banking authorities. It is true that the Federal Reserve Act gives the Reserve System power to make examinations of member banks, but since such examinations would only duplicate the examinations already made by national or state authorities the law specifies that the Reserve Banks may accept the examinations of state and national authorities instead of conducting their own. Federal Reserve legislation fell far short of a thorough revision of the machinery for banking supervision, and an attempt by the Reserve System to exercise general supervision over member banks would have resulted in the confusion of divided and overlapping authority.

The failure to include in the Federal Reserve Act in its original form, and even in the revisions of the Act just completed in the Banking Acts of 1933 and 1935, systematic and comprehensive supervision over banking is consistent with the extraordinary patience of the American people in tolerating an unsatisfactory banking mechanism. The history of efforts in this country to put the banking system on a sound basis has been one of slow progress often interrupted.

Early History of Supervision.—The pity of it is that a good start was made. The first "Bank of the United States" 1791-1811, and the second "Bank of the United States" 1816-1836, maintained while in operation a fairly orderly currency. Their own notes were always good, and their campaigns to force state banks, increasing gradually in number, to redeem their currency at par were fairly effective, so effective in fact as to build up a vast amount of political opposition. Distrust of the "money power" was just as popular a political tune to play then as today. For this and other reasons neither bank was rechartered by Congress when its original 20-year charter lapsed. From 1836 to the time of the Civil War there was no effective public control over banking except in a few of the states. Business was generally done in those days, not so much with bank checks, as with paper money, and the only paper money available was the notes of state chartered banks, some good, some bad, and some indifferent.

Massachusetts appears to have been the first state to undertake supervision of banks. In 1803 her legislature passed an act requiring all banks to make semi-annual reports of condition, and an act a few years later provided limitations on amounts of note issues through penalties for non-redemption of notes. The banks themselves also cooperated in a plan for forcing redeemability of notes.[3] Massachusetts continued in succeeding years to extend state supervision and after the panic of 1837 set up a board of bank commissioners who were required to make annual examinations of every bank.[4] A few other states, notably New York, followed in the wake of Massachusetts, but in most states there were not even provisions for regular reports of bank condition.

In his annual report for 1875 (pages 20-21) the Comptroller of the Currency reviews the conditions prior to the passage of the National Banking Act and quotes an authority from the earlier period.

Mr. Woodbury, in his report as Secretary of the Treasury in 1836, says:

"If all the States would unite in adding a few judicious limitations on the amount of discounts as compared with capital and deposits, and on the safe kind of security to be taken for them, with the requirements of frequent publicity of their condition in detail, and of rigid accountability to periodical examinations by legislative authority, the time is not distant when our currency would become stable; indeed, it deserves consideration whether, under such circumstances, the whole monopolies of banking might not with public advantage be entirely abolished, and the banking privilege, under the above restrictions, securities, limitations, and requirements, (particularly if the personal liability of the stockholders is superadded), might not safely be thrown open to all."

The twenty-seven years succeeding the report referred to, and preceding the passage of the national-bank act, were full of disasters arising from the failures of banks and bankers, and of consequent losses to their creditors and bill-holders. During that period the bank legislation was directed chiefly toward reforming the currency and securing the bill-holder from loss, and but little attention was given to legislation concerning the necessary "restrictions, securities, limitations, and requirements" which should sur-

[3] Comptroller of the Currency, *Annual Report*, 1876, pp. XVI-XVII.
[4] *Ibid.*, p. XVIII.

round any general system of banking authorized by law. Indeed, under the different State systems, it was and is impossible for "all the States to unite" in judicious restrictions upon banking, as suggested by Mr. Woodbury.

The last sentence sounds strangely like certain testimony given before the Houses of Congress in the past five years.

The National Bank Act.—It was the emergency of the Civil War which finally provided the impetus necessary to overcome political inertia. A great war could not be financed without an improved banking system. While the National Bank Act was perhaps designed in the main to aid the government in financing a war, it was in some respects the most thoroughgoing banking reform ever undertaken in this country. Note issues of state banks were taxed out of existence by the revision of 1865, and it was presumed by some at least[5] that practically all banks would be forced to nationalize or close, thus bringing about a unification of the banking system under national supervision.

This result was, however, only partly achieved because of a change which was taking place in the character of banking: business was being done increasingly by use of checks rather than currency. A bank of deposit even without the power to issue notes found an increasingly useful function. The number of state commercial banks and loan and trust companies declined from 1466 in 1863 to 247 in 1868 but then began to increase again until in the nineties and thereafter the number of state banks exceeded the number of national banks.[6]

While not achieving unification of the banking system, the National Bank Act did place the banks it included under effective supervision. The regulatory and supervisory features of the original act included:

[5] For example, Senator Sherman's Speech introducing the tax measure, *Congressional Globe,* 38th Congress, 2nd Session, February 27, 1865, p. 1139.

[6] *Annual Reports,* Comptroller of the Currency. The figures for state banks and loan and trust companies are incomplete and hence the numerical superiority of these banks over national banks was doubtless established at a somewhat earlier point than that actually shown by the data.

Figures are for incorporated state banks and trust companies and exclude private banks. Private banks are, however, included among "other banks" in the comparisons of failures given later in Table 18. In most years the number of private banks was a large but uncertain figure.

Restrictions on the loaning and investing of funds, both as to the kinds of loans and investments in which money might be placed, and as to the amount that might be loaned to any one individual or enterprise (sections 37 and 47);

A requirement for the maintenance of reserve in proportion to note circulation and deposits (section 41);

Minimum capital requirements and a requirement for the maintenance of capital unimpaired (sections 6 and 44);

Double liability for shareholders (section 12);

Provision for quarterly reports of condition verified by oath (section 24);

Provision for the examination of national banks by examiners reporting to the Comptroller of the Currency (sections 9 and 51).

The original act may have contemplated only occasional examinations, but as administered, almost from the outset, examinations were made annually of each institution and without notice. In his annual report of 1869 the Comptroller of the Currency had this to say about examinations:

> Perhaps no one thing has done more to promote the safety and sound management of national banks than their liability to examination without previous notice, by an agent appointed for that purpose, and probably no provision of the law was more unpopular among the banks when the law first went into effect; but the good results brought about, directly and indirectly, by such examinations, have fully vindicated the wisdom of the provision. The examiner's work is done silently, and the public are not aware of either the amount or the importance of the work done. In quite a large number of cases examinations have brought facts to light that have enabled the Comptroller to interpose in time to save banks from failure. Defalcations have been exposed; abuses, irregularities, and violations of law have been discovered and corrected.

The Failure Record.—One test of the effectiveness of this supervision is to be found in the comparative record of failures of national and state banks. The principal source for these figures for earlier years is the annual reports of the Comptroller of the Currency. Figures contained in these reports have to be used with considerable discretion, however, to be sure of their comparability, for the reports he received as to banks other than national were far from complete. Reasonably complete data as to number of other banks in operation are avail-

able in some years as a by-product of the administration of Federal laws taxing banks. Table 18 is based upon these figures.

TABLE 18.—COMPARISON OF FAILURES, NATIONAL BANKS AND BANKS OTHER THAN NATIONAL

	National Banks	Banks Other than National
1876–1878		
Average number in operation	2,075	4,474
Average number of failures per annum	11.0*	70.0†
Average rate of failures per annum	0.53%	1.56%
1898–1902		
Average number in operation	3,919	10,672
Average number of failures per annum	7.6	42.0‡
Average rate of failures per annum	0.19%	0.39%

* The average number of national banks failing per annum in the three years ended October 31, 1878. It is not evident that the figures would be significantly different for the three years ended December 31, 1878.

† *The Annual Report* of the Comptroller of the Currency for 1879 (p. XXXV) states that there were 210 failures of banks other than national in the three years ended January 1, 1879.

According to the Comptroller's study of 1895–6 there were 170 failures in the years 1876–8. This would give average annual failures of 56.7 instead of 70.0. The resultant average rate of failures per annum (1.27 per cent) would still favor national banks decisively. It is believed that the contemporary figure of 70.0 is more comprehensive; and the number of banks is ostensibly complete.

‡ Bradstreet data, reported by the Comptroller of the Currency.

Beginning in 1892 fairly satisfactory comparisons may be made based upon the Comptroller's figures for numbers of banks and upon Bradstreet's data for failures. The rates of failures by decades for national banks since 1863 and for other banks since 1892 are shown in Table 19.

For most recent years the annual figures, subdivided as to national, state member and state nonmember banks, are shown in Table 20.

These are appalling figures even for the national banks and compare unfavorably with the records for other important countries, but they at least indicate the greater effectiveness

TABLE 19.—SUSPENSIONS, NATIONAL BANKS AND BANKS OTHER THAN NATIONAL

	Average Per Cent Per Annum*	
	National	All Other
1863–1870	0.12	
1871–1880	0.34	
1881–1890	0.25	
1891–1900	0.68	
1892–1900	0.68	1.36
1901–1910	0.21	0.41
1911–1920	0.11	0.38
1921–1930	1.18	3.15

* Data derived from *Statistical Data Submitted to Subcommittee of the Senate Banking and Currency Committee, November 16, 1931,* Federal Reserve Committee on Branch, Group and Chain Banking, and from *Annual Reports* of the Comptroller of the Currency and Federal Reserve Board.

C. D. Bremer, *American Bank Failures,* published in 1935 (Columbia University Press, New York) includes comparative failure records of national and other banks based upon somewhat different data from the comparisons given above, but they support the same general conclusions. Bremer uses the failure data collected in the Banking Inquiry of 1925. These data, taken alone, somewhat understate failures of other banks, especially in earlier years.

Bremer also presents the Comptroller's early data on numbers of banks and bank failures; however, these figures for numbers of other banks, when compared with other bank failures, presumably overstate the percentage of such banks failing, because the failure figures are much more inclusive than those of the numbers of the banks.

of national supervision and examination as compared with supervision in most states. It is, of course, true that the mortality was highest among small banks and many state systems included large numbers of very small banks. But that is in itself indication of the sounder standards of the national system in withholding charters from banks of uneconomically small size. Moreover, in banks of corresponding sized groups the record of national banks is better than that of state institutions generally.

During this whole period states were gradually improving

TABLE 20.—COMPARISON OF FAILURES—PERCENTAGES SUSPENDING*

Year	National	State Member	All Member	State Nonmember
1921.....	0.64	1.19	0.73	2.15
1922.....	0.59	0.79	0.63	1.55
1923.....	1.09	1.98	1.24	2.71
1924.....	1.51	2.42	1.66	3.29
1925.....	1.46	1.90	1.53	2.58
1926.....	1.54	2.49	1.69	4.58
1927.....	1.17	2.37	1.34	3.21
1928.....	0.74	1.29	0.82	2.59
1929.....	0.85	1.44	0.93	3.66
Average	1.07	1.76	1.17	2.92
1930.....	2.22	2.53	2.26	7.78
1931.....	6.01	10.90	6.63	13.14
1932.....	4.49	6.59	4.74	9.78
1933.....	19.68	21.99	19.95	31.64
1934.....	0.02	0	0.02	0.63
1935.....	0.07	0	0.06	0.33

* State banks exclude mutual savings banks. Data from *Annual Reports*, Federal Reserve Board and *Annual Report*, Federal Deposit Insurance Corporation, 1934. Banks unlicensed by April 12, 1933 considered suspended.

their supervision, slowly adopting the examination method, standardized reports, and higher requirements, but even today many, if not most, of the state systems lag behind the national in their effectiveness. Some it should be added, bear comparison well, and many banks operating under state charter are among the strongest institutions in the country.

The national and state systems have labored under considerable handicaps in enforcing sound standards. In the final analysis, the only available penalty at the command of the Comptroller or the state supervisors and their examiners, when there was no defalcation justifying criminal action, was to close a bank, which is exactly what they sought to avoid. More serious still was the competition between the two banking systems. The power to enforce rigorous banking standards

has always been limited by the power of the banks to change from national to state charters or vice versa. Many of the banking troubles of the past decade may be traced to the years from 1900 to 1920. These were years of rising prices and great prosperity, especially in agricultural regions. In this favoring soil banks sprang up like mushrooms: the number of commercial banks in the country increased from about 9,000 in 1900 to about 22,000 in 1910, and 29,000 in 1920. This growth was especially unfortunate at a time when the automobile was rapidly increasing the area one bank could serve. The greatest growth was in state banks under relatively lax state laws; but seeing the national system losing ground the Congress in several steps relaxed the requirements for national banks. The resulting situation was described by Eugene Meyer, Governor of the Federal Reserve Board, before the House Committee on Banking and Currency in January, 1932, as follows:

> The competition that exists at the present time between State and national banks cannot fail to remind one of the competition that prevailed a generation ago among the various States seeking to become domiciles for corporations—a competition that was based upon the laxity of the laws governing incorporation. Nothing could be more disastrous than competition between the State and national banking groups based upon competition in laxity.[7]

Responsibility of the Reserve System.—This is the kind of situation upon which the Federal Reserve System was superimposed in 1914 with the pious hope expressed in the preamble to its legal constitution that it might "establish a more effective supervision of banking in the United States."

The Reserve System does have under the law certain specific powers which may be thought of as supervisory, and these powers have been increased recently. The powers in the original Federal Reserve Act may be listed with brief comments as follows:

1. Admission to membership and expulsion from membership.—The requiring of high standards for admission of state banks acts

[7] U. S. House of Representatives, Subcommittee of the Committee on Banking and Currency, *Stabilization of Commodity Prices,* Hearings . . . Statement of Eugene Meyer before 72nd Congress, 1st Session on H.R. 10517, April 13 and 14, 1932, Part 2.

somewhat to improve the quality of state member banks, and a bank may forfeit membership for failing to comply with the law or regulations of the Board.

2. Requiring reports of condition.—The very fact of making a regular detailed report exerts on a bank a kind of moral pressure to make a good statement.

3. Examination of member banks.—Federal Reserve Banks were empowered to make special examinations of their member banks "to inform the Federal reserve bank of the condition of its member banks and of the lines of credit which are being extended by them." Until recently few complete examinations were in fact made, to avoid duplicating those of the regular supervisory authorities, which the Reserve Banks might accept in lieu of their own. A common practice was to send an examiner with the national or state examiners especially to look over the assets eligible for discount.

4. Making loans.—When the member bank borrows, the requirements that the paper presented for discount shall meet the test for quality, and that the bank itself shall be in sound condition, make towards higher standards.

5. Granting trust powers to national banks.—Just as in the case of membership the maintenance of standards prerequisite to the granting of trust powers has exerted a beneficial influence upon the quality of banking.

All these were supervisory powers the exercise of which has tended to improve the quality of banking management. Perhaps more important still has been the informal influence of the Reserve Banks in their frequent contacts with member banks. They have constituted a friendly central agency continuously interested in improving the quality of banking. These powers taken together, however, have hardly constituted an effective supervision of banking. The field has of necessity been left largely to the national and state supervisors.

Since the passage of the original Federal Reserve Act these semi-supervisory powers have been greatly increased, principally by the Banking Acts of 1933 and 1935. The additional powers may be listed as follows:

1. Interlocking directorates.—The Reserve System was intrusted with enforcing the Clayton Act limiting interlocking bank directorates.

2. Control of speculative loans.—The System was given power

to refuse its lending facilities to banks making "undue use" of bank credit in speculative loans or "for any other purpose inconsistent with the maintenance of sound credit conditions,"[8] and to prescribe margins on loans for carrying registered equity securities; also power to fix by districts the percentage of capital and surplus of member banks that may be represented by security loans.

3. Removal of poor management.—The Reserve System has power to remove officers or directors of state member banks who continue to violate the law or to engage in unsafe or unsound practices after they have been warned to the contrary and after a hearing. This power will seldom be used but lends weight to admonitions.

4. Examination of affiliates and giving holding company affiliates permits to vote stock of banks.

5. Approval of establishment of branches.

6. Determination of maximum interest rates to be paid on time deposits.

These powers have clearly placed upon the Reserve System added responsibility for the quality of the banks which are members, a natural consequence of the banking disasters of recent years. The System has recognized its new responsibilities by enlarging its examination force and increasing the number of examinations it makes, especially of state member banks. But the old problem of ambiguous authority still remains.

New Complications.—The confusion of pre-depression days has even been increased by the introduction of two new bodies with some measure of supervisory powers, the Reconstruction Finance Corporation and the Federal Deposit Insurance Corporation. While the Reconstruction Finance Corporation, under the law, does not have specific supervisory authority, the power to make loans and to purchase preferred stock of banks has involved the determination of conditions under which advances of funds might be made. The Federal Deposit Insurance Corporation, on the other hand, has under the law a considerable list of specific supervisory powers, which in some measure overlap the powers of other supervisory bodies.

[8] Section 4, Paragraph 8 of the Federal Reserve Act as amended by the Banking Act of 1933.

The principal such powers conferred by the Banking Act of 1935,[9] may be listed as follows:

1. Power to examine insured banks, or banks applying for insurance, although national banks may be examined only with the consent of the Comptroller of the Currency and state member banks only with the consent of the Federal Reserve authorities (subsections f, g, and k);
2. Power to terminate the insured status of a bank, after hearing (this means termination of Federal Reserve membership on the part of a state member bank and forfeiture of charter on the part of a national bank) whenever unsafe or unsound practices, or violations "of any law or regulation to which the insured bank is subject" are uncovered (subsection i);
3. Power to require reports of condition from insured nonmember banks "in such form and at such times as the board of directors may require" (subsection k);
4. Requirement of written consent of the Corporation for an insured bank to enter a consolidation with a non-insured bank or for an insured nonmember bank to reduce its capital or establish new branches (subsection v).

There are thus five separate authorities dealing with banks, the Comptroller of the Currency, the Federal Reserve System, the Federal Deposit Insurance Corporation, the Reconstruction Finance Corporation, and in each state the state supervisor of banking. Some banks find themselves having relations with four or even all five of these bodies, and thus the possibility of duplications of examinations and reports and conflicting orders becomes considerable.

The provision of the original Federal Deposit Insurance law that all insured banks must become members of the Federal Reserve System by July 1, 1936, would have provided some further measure of unification of the banking system, some further assurance of common standards, and further concentration of responsibility. But the Banking Act of 1935 postponed the effective date of this provision until 1942, and so modified it as to require membership in the Federal Reserve System only of insured banks with deposits of a million dollars or more.

[9] Section 101. This became Section 12B of the Federal Reserve Act as amended.

Under the pressure of the crisis the various agencies sharing responsibility for bank supervision have been cooperating whole-heartedly to put the banking system on its feet. The Reconstruction Finance Corporation will in time have its advances to banks, both in the form of loans and preferred stock, repaid and will presumably terminate operations, but the other four organizations are permanent and without the pressure of emergency their overlapping powers are likely to create confusion and irritation, and impair effectiveness.

Some Implications of Recent Changes.—The legislation of the past three years has swung far in the direction of government responsibility for banking. When the banking system broke down in the spring of 1933 it was clear that something had to be done about it. The first necessity was to get the system on its feet, and with a stability which could be relied upon as a basis for business recovery. The only way to do this was to have the government step into the picture. The government having assumed these responsibilities it seemed necessary to accompany the responsibility with a greater measure of control. Such control was suggested also by the defects shown by the banking system during the boom period. Thus the present governmental supervision of banking grew logically and directly from the circumstances. And because every move was made in haste it grew a bit haphazard, with responsibility for supervision, for example, divided among a number of different bodies. The plans which were devised logically and naturally to meet an emergency are not necessarily the best permanent plans for a sound and progressive banking system. There is a great deal of experience in several states to show that deposit guaranty systems tend not only to become insolvent but to encourage bad banking. True they were never tried before on a nation-wide scale, and with national supervision, but human nature is the same whether it operates within state or national limits, and the burden of proof rests upon the deposit guaranty plan as a permanent institution.

The country has been through a disillusioning and humiliating experience with respect to banking. It is discouraging for a great country to find it had such a poor banking system.

A good one is essential, for bank deposits are now the nation's money, and that money must be sound and reasonably stable. The government which is empowered under the Constitution to "coin money" and "regulate the value thereof" has responsibility for the banking system. But it is desirable to be open-minded as to the particular methods which are likely to prove most effective over a period of years in fulfilling that responsibility.

Limitations on Effectiveness of Supervision.—It should be acknowledged at this point that no system of supervision is a cure-all. Laws and regulations and examinations have been helpful but they alone cannot create good banking. Able and sound management is the prime essential. The best banking system is one which enlists the ablest management and gives it the best training. In other countries the mechanism for training bankers is branch banking. A young man in a branch system is put through a varied course of training; as his responsibilities increase, he is under continuous supervision. Special men are trained for particular functions. Investments, for example, in a bank with many branches, can be handled by a qualified department.

Under the system of unit banking developed in the United States each bank is independent, and selects its own personnel. The officer of a small unit bank has seldom been through such purposive training as the branch bank manager, and is under the control of a group of local business men with little banking background and with personal interest in many of the loans and investments held by the bank. Such a banking system must of necessity rely more largely on government supervision than a system with widespread branch banking. In fact many countries with branch banking have little or no governmental supervision.

The question may well be asked whether branch banking is not a better method of enlisting and training qualified bankers. But this is not the place for an extended discussion of that highly controversial question. Despite some growth in branch banking, the United States has, and is likely to have for some time, mainly the unit bank system. The point to be made here

is that the effectiveness of supervision depends a great deal on the basic organization and the quality of management of the banking system.

Another limitation on the effectiveness of supervision is that it must of necessity be somewhat arbitrary in character. It must be based upon definite provisions of law and definite regulations. If hundreds of examiners are to have the right to enter a bank and make formal recommendations to the management and directors, the procedure must be somewhat standardized. The individual examiner cannot be allowed complete flexibility to express his own likes and dislikes. The necessary standardization has dangers as was illustrated during the depression. It was the accepted practice for bank examiners to appraise the assets of a bank, and if the appraised value of the assets fell short of its liabilities, more capital had to be raised or the bank was closed. Now in the recent depression all values declined greatly; and hence, as the examiners appraised bank assets at market prices, they found many banks at least temporarily insolvent and took the matter up with the bank directors. Before this procedure could be changed it led directly or indirectly to the closing of many banks. Banks in other countries, not supervised by public authorities, may have been just as insolvent, but with no official examiner to point out the fact they may ignorantly survive the depression and find themselves quite solvent as values recover. As the depression advanced in this country this difficulty was recognized and greater flexibility was introduced in appraising assets at more nearly normal values. This is not an argument against government supervision but a recognition of certain of its limitations and weaknesses even apart from questions of jurisdiction.

Still another impediment of a basic sort to successful supervision is the practice in the United States with respect to time deposits, which was discussed briefly in Chapter III. Most banks in this country accept time and savings as well as demand deposits. While banks reserve the right to require 30, 60, or 90 days' notice for the withdrawal of time deposits this right is seldom exercised and in fact cannot usually be exer-

cised while demand depositors are free to remove their funds without notice. To require notice from time depositors would in fact be giving demand depositors preferential treatment. The time deposits are in effect demand deposits, but in order to earn a competitive rate of interest have frequently been invested in long term assets. This inconsistency of borrowing short and lending long has constituted a basic weakness in the banking system and has subjected long term assets to violent deflation when banks have had to sell these assets rapidly to meet demands of time depositors.

Looking into the future, the effectiveness of bank supervision in this country seems likely to be greatly influenced not only by the quality of supervision itself but by the disposition of a number of basic banking problems including:

1. The relation between the national and state governments in their power to charter and supervise banks.
2. The relation between various Federal bodies having some supervisory powers.
3. The permanence of deposit insurance.
4. The progress of branch banking.
5. The treatment of demand and time deposits.

SUMMARY

1. While the supervision of banking was one of the professed purposes of the Federal Reserve Act, only limited power of supervision was given the Reserve System. Membership included only one-third of the banks and even for these, major supervisory power continued with the Comptroller of the Currency or the state banking departments.
2. The history of banking supervision in the United States is one of slow progress, often interrupted.
3. The National Banking System introduced a form of bank supervision far more effective than that for state banks in most states, as is indicated by fewer national bank failures.
4. Effective supervision has, however, been impaired by the dual banking system which has permitted banks to change from national to state charters or vice versa.
5. While the Reserve Act gave the Reserve System limited

general supervisory powers it did give a number of specific powers which have been used to improve the quality of banking.

6. The recent creation of two new bodies, the Reconstruction Finance Corporation and the Federal Deposit Insurance Corporation, with certain supervisory powers, further complicates the problem of division of responsibility.
7. Supervision alone, no matter how stringent, cannot assure a sound banking system. Quality of management is the prime essential.
8. Supervision and management are both likely to be hindered or helped by the disposition of such basic problems as branch banking, the treatment of time and demand deposits, and deposit insurance.

CHAPTER IX

The New York Money Market

THE New York money market is the national market for liquid and surplus funds. As the leading money market of the country, it is the center towards which idle money gravitates to find employment, pending the time when it is needed. Banks and large business concerns all over the country which have funds temporarily idle because of seasonal variations in the demand or for other reasons, or which maintain as a permanent policy a reserve of liquid funds, send them to the New York money market. In recent years a substantial volume of similar money has come from other countries to New York. Funds from these various sources are kept on deposit with banks; invested in short-term securities such as acceptances, Treasury bills and notes, or other short obligations; or are lent in the stock exchange money market for a definite period as time money or on a day-to-day basis as call money.

The distinctive feature of this use of funds is that they are available when they are needed, either at a specified time or, in the case of call money or money invested in acceptances or Treasury bills and notes, on a day's notice at any time. Call loans can be called and acceptances and Treasury bills and notes can be sold whenever the funds are needed. The money in the money market may thus be thought of not simply as surplus funds, but as the secondary reserves of banks and business all over the country.

The importance of the money market for the nation does not lie solely in its size. It lies rather in its liquidity, in its capacity for furnishing cash to any part of the country at a few hours' notice. What a bank balance is to the individual, the money market is to the country's credit system. Both represent ready cash available for immediate needs.

Since the New York money market employs funds from all

parts of this country and from other countries as well, it reflects changes in the need for funds from any quarter. Increases in the use of money for business, trade, and agriculture draw funds from the New York market, and decreases in such use pour funds into the New York market. When the wheat or cotton crop is being harvested, when Christmas shopping creates a need for more currency, or when factory payrolls increase, funds are drawn from New York. But when winter dulness settles over the farms, when Christmas currency returns to the banks, or when the factories begin to reduce payrolls, then funds flow back to New York. A flow of funds to and from other countries reflects changing economic conditions both abroad and at home as well as the changing emotions of fear and confidence.

One result of the wide distribution of ownership of funds in the New York money market is that they are in constant movement, for there is almost never a time when some need for funds is not arising from one quarter or another. The movement of funds in the internal operations of the money market and security markets is in itself large also. The rapidity of movement in the market may be seen in the statistics for the velocity or rate of turnover of demand deposits. These figures show that demand deposits in New York City in normal times have a rate of turnover of about seventy-five times a year, whereas the rate of turnover in other large cities is only about half as great. This rapid movement of funds puts to the test the organization of the money market.

Small movements of funds sometimes have large effects in the market. A transfer of as little as $25,000,000 from New York may at times cause an increase of ½ per cent in the call-loan rate. For the money market is a point at which adjustments take place between the country's supply of and demand for funds. A transfer of $25,000,000 from New York may be the indication that the country's supply of funds is short of the demand at the rates which have been prevailing. In the New York market we are dealing with what economists call the marginal supply and the marginal demand, which are

the first to show any change in conditions for the country as a whole.

In financial panics in this country it has been in the New York money market that the first signs have appeared, just as in England it has been in London that financial crises have centered. Year in and year out the great bulk of all ordinary financial operations throughout the country is carried on smoothly and quietly, with the supply of funds taking care of the demand without question. Trouble only comes with the extra demand, or the extra supply, and the money market is the place where extra supply and extra demand make their first appearance. The country's financial stability depends not a little on the capacity of the money market for making a smooth adjustment to the new condition when extra supply or demand begins to appear. If at any time it becomes impossible for out-of-town lenders to convert promptly into cash the funds they have placed in the New York market, the result is likely to be a money panic.

Place of the New York Banks.—New York commercial banks have several kinds of relationships with the money market. In the first place, these banks are large investors in the market. They often keep as much as a billion dollars in the stock exchange money market. They keep substantial amounts employed in acceptances, Treasury bills and notes, and commercial paper.

In the second place, the New York banks act as agents for out-of-town banks and other banks and bankers who employ funds in the money market. When the Tenth National Bank of Muncie, Indiana, wants to put funds out on call, it transfers the funds to its New York correspondent. The amounts of out-of-town funds placed in the market in this way have frequently been larger than the amounts placed for the account of the New York banks themselves. For example, the figures reported by New York City member banks at the end of 1926, a reasonably typical period, showed that their loans to brokers and dealers for their own account averaged 900 million dollars, whereas their loans of this character for the account of out-of-town banks averaged over one billion dollars. Moreover,

the New York City banks had on deposit from other banks, mostly out of town, about 650 million dollars. The amounts of balances of national corporations operating over wide areas are probably several times this amount.

As an illustration of the changes to which the money market must adjust itself these figures may be compared with the figures at the height of the 1929 speculative boom and at a more recent date.

TABLE 21.—LOANS TO BROKERS AND DEALERS PLACED BY NEW YORK CITY BANKS

(Monthly average of weekly figures in millions of dollars)

	Dec. 1926	Sept. 1929	April 1935
New York City banks' own account	887	1,048	714
For account of out-of-town banks	1,045	1,850	86
For account of others*	766	3,642	3
Total	2,698	6,540	803
Deposits of out-of-town banks in New York City	645	637	1,628

* Loans for account of individuals, firms, or corporations (other than banks) prohibited by New York Clearing House on November 16, 1931, and by the Banking Act of 1933.

In the third place, the New York City banks are bankers for the money market. The market keeps its funds on deposit with them. When a broker or dealer receives funds he deposits them in one of these banks. When he makes a payment he does it with a check on one of them. The deposits of New York banks thus constantly reflect money-market operations.

Any extra demand for or supply of funds is thus registered in one way or another in the condition of the New York banks, and the elasticity and stability of the market depend on the reserves of these banks.

Suppose the wheat crop is unusually large and in order to

pay off extra harvesting help the banks of the West call $25,000,000 of call loans in New York. The procedure will be about as follows: When brokers Smith & Jones, or Peters & Hall, who are borrowing this money from out-of-town lenders for the use of their customers, get notices calling their loans, they probably borrow the amount from New York City banks and pay off their called loans. As the funds are transferred to the West, reserves of New York banks are correspondingly reduced.

Or suppose the banks in the West, instead of calling loans, sell securities in New York. They will probably be paid by checks drawn on New York City banks or wire transfers from New York banks, with the same consequence in reducing the reserves of those banks. No matter what form an outside withdrawal of funds from the market takes, it usually results promptly in a reduction of the reserves of New York City banks. If this process continues it tends to result in higher money rates and a gradual liquidation of money-market loans, and frequently a reduction in security prices. These changes eventually reduce both the deposits and the reserve requirements of New York City banks. But the immediate result is to reduce only the actual reserves of these banks. They bear the brunt of shifts of funds to and from the market, of fluctuations in the whole nation's use of money.

Elasticity Before 1914.—In the days before the Federal Reserve System the surplus reserves of New York banks were the best measure of the country's ability to deal with any financial emergency, because they showed the extent to which the money market could be drawn upon to meet needs for funds in any part of the country. There were, it is true, other possible means of meeting serious crises, such as the import of gold from abroad, Treasury deposits of gold in the banks, or the issuing of clearing house loan certificates; but the reserves of New York banks, and to a lesser extent of banks in other cities, were the first line of defense. When these reserves were reduced to the legal minimum, and there were no longer any surplus reserves, then the credit situation became strained. There was still plenty of money in the banks, but it could not

be used because the law prescribed a legal minimum below which reserves should not go. There was no machinery by which these reserves could be either used with safety or increased with promptness.

The close dependence of money conditions on bank reserves is illustrated by Diagram 16, in which one line shows the average monthly surplus or deficit of reserves of New York City

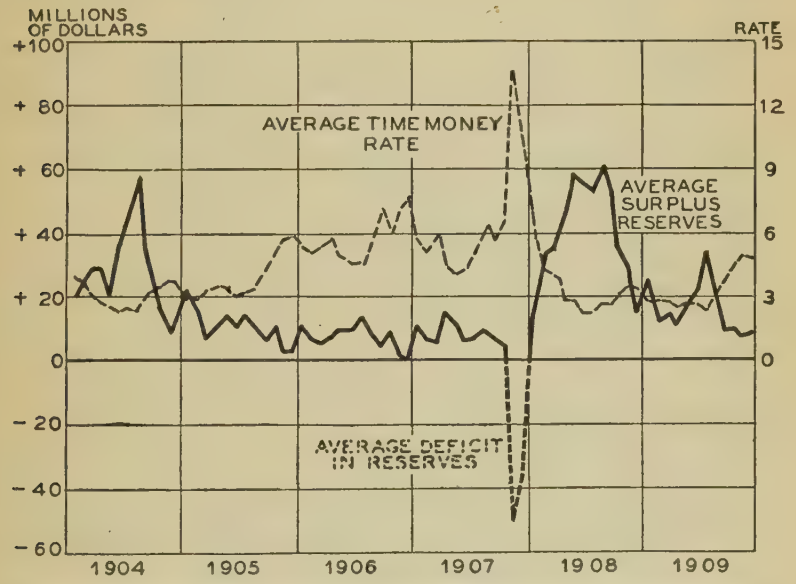


DIAGRAM 16—BEFORE THE RESERVE SYSTEM THE TIME-MONEY RATE WAS CLOSELY RELATED TO THE SURPLUS OR DEFICIT OF RESERVES OF NEW YORK CITY BANKS.

banks, and the other line shows the average monthly rate for time money. When there were large surplus reserves, money rates were low; when reserves were low, money rates were high.

One impressive feature of the diagram is the narrowness of the margin of reserves. For many months average surplus reserves were under $10,000,000. In November, 1907, an average deficit of $50,000,000 in reserves was accompanied by soaring money rates and by temporary suspension of specie payments in many parts of the country.

The record in this period illustrates the value of the Satur-

day report of the New York Clearing House banks, showing their surplus reserves, as indicators of the country's credit condition. These surplus reserves were the principal basis for any elasticity which the country's banking system possessed.

Elasticity Today.—The fundamental change which the Federal Reserve System has made in this situation is to shift much of the burden of meeting the fluctuations in the demand

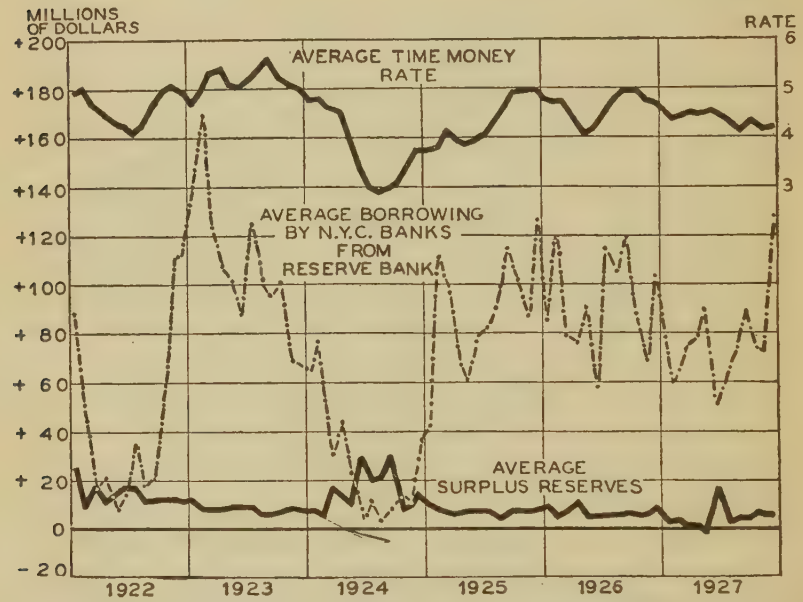


DIAGRAM 17—UNDER THE RESERVE SYSTEM SURPLUS RESERVES OF NEW YORK CITY BANKS HAVE USUALLY SHOWN LITTLE FLUCTUATION AND MONEY RATES HAVE BEEN RELATED TO THE AMOUNT OF BANK BORROWING FROM THE RESERVE BANK.

for credit from the reserves of the member banks in New York City to the twelve Reserve Banks, which through the strength of their holding of pooled reserves and through their power of note issue and deposit expansion can provide almost any extra funds required.

The change which has taken place may be illustrated by Diagram 17, showing for a number of years after the establishment of the Reserve System, and before the depression, similar data to those in Diagram 16, with an additional line.

During these years there was little fluctuation in the average surplus reserves of clearing house banks. Instead, the adjustment to changes in the supply of and demand for credit took place in the loans of the Reserve Bank. The one interesting exception which the diagram shows was in 1924, when the banks had repaid their loans and for a few weeks held excess reserves, and money was exceptionally easy. A similar relationship has occurred in 1933 to 1936. But over most of the history of the System, changes in Federal Reserve credit, rather than changes in bank reserves, have been related to changes in money conditions.

Another effect of the establishment of the Reserve System has been to divert from the New York market some of the adjustments of marginal funds. Member banks in all parts of the country may now meet extra demands for funds by borrowing at their local Reserve Bank and may use extra supplies of funds to pay off any such borrowings. Moreover, with the support of the Reserve Banks local money markets are developing in certain of the Federal Reserve cities.

While these changes have diverted many transactions from New York to other centers and have made the country's finance somewhat less dependent on New York, the New York money market remains the country's principal center for the use of surplus funds, and for the adjustment of banking reserves. The precise methods by which the money market gains elasticity and stability through the operations of the Federal Reserve Bank of New York are therefore of interest.

Access to the Reserve Bank.—The money market and the Federal Reserve Bank of New York are connected by several channels of communication. Diagram 18 is an attempt to illustrate these channels.

Of the four principal markets which make up the money market, two have direct access to the Reserve Banks. Under the terms of the Reserve Act, the Reserve Banks may buy bills (bankers' acceptances) and government securities or government guaranteed securities in the open market, but they cannot buy commercial paper or make loans in the stock exchange money market. The Reserve Banks can also buy short-time

municipal warrants issued in anticipation of taxes and obligations of the Federal Farm Loan System, but such purchases have in practice been so small that these markets have not been included in the diagram.[1]

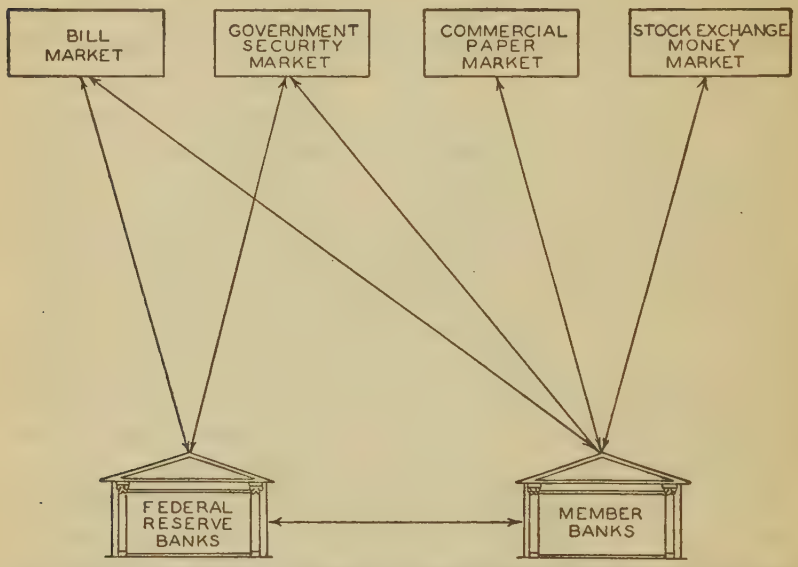


DIAGRAM 18—THE BILL MARKET AND THE GOVERNMENT SECURITY MARKET HAVE DIRECT APPROACH TO THE RESERVE BANKS, BUT THE OTHER PRINCIPAL MONEY MARKETS HAVE ACCESS ONLY THROUGH MEMBER BANKS.

It is through the member banks that the money market ordinarily has had its principal connection with the Reserve Banks. The amount of Reserve Bank funds which goes di-

[1] In this connection mention should be made of an informal money market which has developed in recent years, the market for "Federal funds." A bank which finds itself with surplus reserve deposits at the Federal Reserve Bank frequently sells these funds to some other bank which is deficient in its reserves. The balances at the Reserve Banks thus purchased, which are known as "Federal funds," are different from other funds because they represent immediate cash that day at the Reserve Bank, whereas an ordinary bank check is not cash until it has gone through the clearings the following morning. The buyer of "Federal funds" pays for them with a check which will be collected through the clearings the following day. The transaction amounts to buying today's money with tomorrow's money and paying interest for a day. The market for "Federal funds" adds to the fluidity of the money market; it helps demand and supply to become adjusted rapidly. "Federal funds" are as a rule bought and sold by individual negotiation between banks, although some of the dealers in bills and securities also deal in "Federal funds."

rectly into the money market has generally been small compared with the amount which is advanced to member banks and reaches the market indirectly. The member banks may pass on to the Reserve Banks the securities dealt in by three of the four money markets: bills, United States Government securities, and commercial paper. They sell bills to the Reserve Banks; they borrow with bills, United States securities, or commercial paper as collateral; or they rediscount bills or commercial paper they may have purchased. In addition, they rediscount or secure advances upon their customers' commercial paper or, under the Banking Act of 1935, upon almost any good asset. Nonmember banks sell bills to the Reserve Banks.

It should be noted that in all but one of these types of transactions by which the markets or banks secure Federal Reserve funds, the initiative is taken by the dealer or the banker. It is only in the purchase of United States Government securities that the Reserve Banks ordinarily take the initiative, and even such purchases, if made under a repurchase agreement, are made on the initiative of the dealers in government securities who require assistance in carrying their portfolios.

Another interesting feature of the relationship between Reserve Bank and money market is that in certain of the transactions in bills and government securities the New York Reserve Bank acts as the agent of other Federal Reserve Banks. A considerable part of the holdings of acceptances and government securities of all the Reserve Banks is purchased in New York and distributed through the System under general policies determined by the Open Market Committee.

Through these various channels there has developed an organic connection between the New York money market and the Reserve System. The operations of the Reserve Bank of New York, and in lesser degree of the other Reserve Banks, have come to reflect money-market changes in much the same way as the reserves of New York City banks formerly reflected such changes. Today when $25,000,000 is withdrawn from New York to meet a demand for currency for harvesting, the demand often falls as before on the money market and through the market on the New York City banks. But these

banks no longer rely solely on their surplus reserves in meeting such a demand. They can draw funds from the Reserve Bank.

This extra demand for funds can be met with much less strain on the credit situation than in the days when commercial bank reserves bore the brunt of any increase in demand. Additional borrowing at the Reserve Bank does have, it is true, some effect upon the money position. Funds borrowed from the Reserve Bank have to be paid for at the discount rate, and the use of additional Federal Reserve funds is frequently accompanied by some firming in money rates, as was the putting to use of surplus reserves in former days. The principal difference between the two operations lies in their possible extent. In the old days there were rigid and not far distant limits to the reserves available; now the mechanism of the Reserve System provides for a much larger possible expansion. It gives much greater elasticity. The principal problem of Federal Reserve policy is the control of this elasticity and particularly avoidance of over-expansion.

The character of Federal Reserve transactions with the banks and the money market, which consist primarily of operations for the adjustment of reserve position, is revealed by the rapidity with which loans are made and paid off. The average amount of bills and securities (including loans to member banks) held by the Federal Reserve Bank of New York during 1925, a reasonably normal year, was $287,000,000. The total amount of bills and securities acquired during the same period was $19,900,000,000. The average number of days for which different types of paper were held was as follows:

Discounts and advances	3 days
Bankers' bills	15 days
U. S. securities	50 days

The close relationship between money-market movements and the Reserve Bank may be illustrated by a comparison of the day-to-day fluctuations of the call-loan rate, the most sensitive index of money-market conditions, and the changes in the amount of Reserve Bank credit in use. This comparison is made in Diagram 19. It shows that when money is in de-

mand, as shown by high call-loan rates, the banks and the market draw funds from the Reserve Bank, and the amount of Reserve Bank credit in use is increased. Conversely, when the supply of funds increases, as shown by low call rates, funds are returned to the Reserve Bank. Just as the country as a whole is constantly adjusting its credit supply to its needs through the New York market, so the New York market is, at

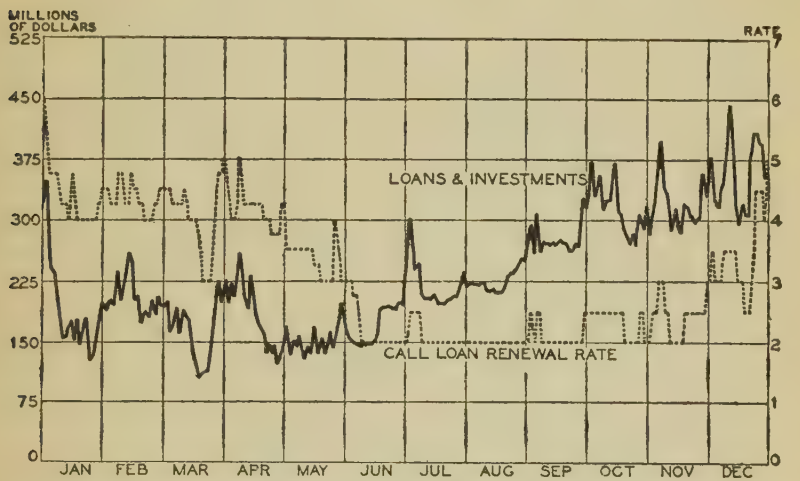


DIAGRAM 19—DAILY CHANGES IN MONEY CONDITIONS IN THE NEW YORK MARKET ARE REFLECTED IN LOANS AND INVESTMENTS OF THE FEDERAL RESERVE BANK OF NEW YORK. (FIGURES FOR 1924.)

times when money is needed, daily adjusting its supply to the demand through the Reserve Bank.

The converse of the situation shown in Diagram 19 may be found in a year like 1934. During that year money was not in demand and, in fact, the banks held surplus reserves ranging from three-quarters of a billion dollars to two billion dollars. During the year call-loan rates remained unchanged at one per cent and the member banks in New York City borrowed practically nothing from the Federal Reserve Bank. In scientific language this is an excellent example of the "negative instance," which assists in proving the relationship shown in Diagram 19.

A more detailed statistical analysis of the interaction between the New York Reserve Bank and the money market

will follow in a later chapter, after a discussion of the bill market.

SUMMARY

1. The New York money market is the national market for surplus funds, the marginal market where supply and demand meet.
2. Before the Federal Reserve System the elasticity of the money market depended largely on the surplus reserves of New York City commercial banks; an additional call for funds led to withdrawals of these reserves and a surplus of funds increased these reserves. Money rates reflected directly the condition of these reserves.
3. The margin of surplus reserves was often narrow and the fear of financial panic because of money stringency was never wholly out of mind.
4. Under the Reserve System the burden of meeting the fluctuations in the demand for funds has been shifted from the member banks to the Reserve Banks, whose resources are adequate to meet almost any emergency.
5. Access of the money market to the Reserve Banks is largely through the member banks, but in part also through the markets for bills and government securities. The average duration of a loan or investment of the New York Reserve Bank is only five days.
6. Just as the country as a whole is constantly adjusting its credit supply to its needs through the New York market, so the New York market at times of active use of money is daily adjusting the supply to the demand through the Reserve Banks.
7. The presence of the Reserve System gives greater elasticity to the supply of funds—and the control of that elasticity is the central problem of Federal Reserve policy.

CHAPTER X

The Bill Market

ONE of the four money markets described in the preceding chapter has a peculiarly intimate connection with the Reserve System, and that is the bill market, or the bankers' acceptance market. The bankers' acceptance, or bankers' bill, or more familiarly the bill, which will be described more fully later, is a comparatively new member of the society of credit instruments in this country. The bill of exchange was used in this country before the Civil War but its use was then practically discontinued. The law did not permit national banks to "accept" bills, and although a few state banks had this authority under state law there was no domestic market for this type of instrument. The bankers' acceptance was therefore an adopted child. It did not grow up from gradual and unconscious beginnings as did many of our institutions, but was taken over from Europe at the same time that the Federal Reserve System was inaugurated.

The adoption of the bankers' bill was a matter of curiously unanimous consent. In the years from 1908 to 1913 banking reform was a major topic for congressional investigation and many measures were prepared dealing with the subject. Practically every one of these measures included some provision for establishing in this country a market in which acceptances might be bought and sold as they are in the discount market in London. In all the discussions surrounding the consideration of these bills and in the debate over the Federal Reserve Act, there was hardly a dissenting voice to the proposal for establishing a discount market. Hence the Federal Reserve legislation granted to national banks in this country the power to accept drafts drawn upon them, and state laws were shortly amended to follow suit. These accepted drafts were made

eligible for purchase by the Federal Reserve Banks, and thus the necessary foundations were laid for a discount market.

In its first sixteen years the adopted infant, fostered by the Reserve System, grew steadily in the midst of war and disturbed world credit conditions. Year by year the numbers and kinds of bills drawn increased and the market for bills expanded, though this growth was interrupted by the depression, due largely to declines in the volume of trade and prices.

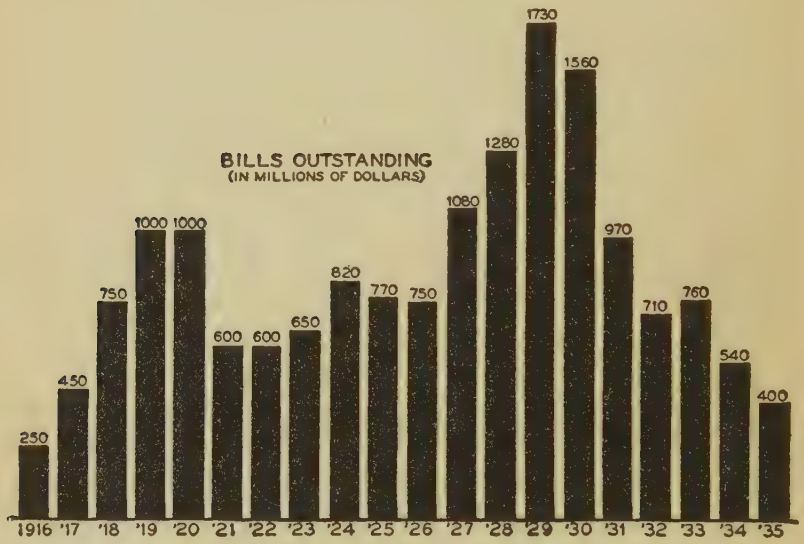


DIAGRAM 20—DOLLAR VALUE OF BANKERS' BILLS OUTSTANDING ON DECEMBER 31 OF EACH YEAR.

Size of Market.—The growth of the volume of bills drawn is shown in Diagram 20 which gives the estimates by the American Acceptance Council (composed of banks and dealers interested in the acceptance market) of the total amount of bankers' bills outstanding at the end of each year. Under the stimulus of post-war activity, a volume of business was reached in 1919 and 1920 of about one billion dollars. Price decreases and recessions in trade in 1921 and 1922 were accompanied by reductions in the amount of bills in the market, but following that period recovery was steady and substantial, until at the end of 1929 the volume of outstanding dollar ac-

ceptances reached its all time peak of about 1¾ billion dollars. Then followed the long period of declining prices, diminishing trade, and exceedingly cheap money. As a consequence, the volume of acceptances diminished steadily and the volume outstanding has been under 400 millions since May, 1935.

The size and progress of the bill market may be visualized by comparison with the commercial paper market. The commercial paper market has been in existence in this country for more than sixty years as a well recognized means for commercial financing. For some time the Federal Reserve Bank

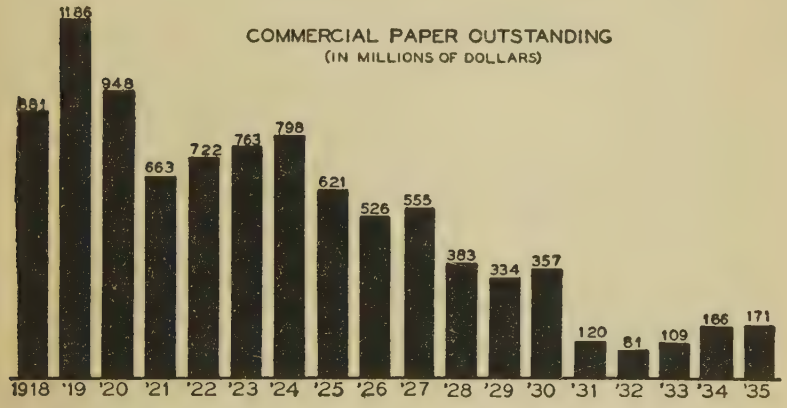


DIAGRAM 21—DOLLAR VOLUME OF COMMERCIAL PAPER FINANCED IN THE OPEN MARKET AND OUTSTANDING ON DECEMBER 31 OF EACH YEAR.

of New York has received each month reports on the volume of commercial paper outstanding from representative dealers who handle a large percentage of the amount of paper sold in this country. These figures show a total of nearly 1,300 million dollars of paper outstanding at the highest month in 1920, a decrease to 334 million dollars by the end of December, 1929 and to 171 million dollars in December, 1935. Since about 1924 the amount of financing done through the bill market has been substantially larger than the amount carried on through the long established commercial paper market. The figures for December 31 of each year are shown in Diagram 21.

Another interesting comparison may be made between the size of the bill market in this country and the size of the

London bill market, which has been for many years the recognized center for financing world trade. Before the war it was estimated by a number of competent authorities that there were currently outstanding through the London market something like 325 million pounds of bankers' bills, or a little over 1½ billion dollars. Since the war the amount of bills in the London market has probably been smaller partly due to the fact that some transactions formerly financed in sterling are now financed in dollars, and perhaps partly due also to the large volume of Treasury bills in the market available as a form of investment. Mr. D. Spring-Rice of one of the important London discount houses estimated[1] that in January, 1923, there were about 800 to 900 million dollars of sterling bills outstanding. The volume of dollar acceptances at that time was about 600 million dollars. In the "Financial News" (London) of January 22, 1934, it was estimated that the amount of sterling acceptances then stood at slightly over 120 million pounds, or approximately 600 million dollars at the current rate of exchange—not far different from the dollar acceptance volume at the same time. Since then the volume in this country has probably declined more than that in London.

Thus, the bill market in the United States has grown to a position of importance in the money markets of the world, though at the moment of writing special circumstances have reduced the volume of bills outstanding.

Nature of the Bank Bill.—There are few fields of finance more deeply buried in technical jargon than the bill market, partly because there is hardly any more complicated series of transactions than some of those which involve bank acceptances, and also because the instrument itself appears in many languages and in many forms.

The essence of the simplest form of the transaction is that a seller of goods wants to get his money before the buyer is ready to pay. This is particularly important when buyer and seller are many miles apart, and it may be several weeks before the buyer receives his goods from the seller. The buyer's bank, however, gives the seller a guaranty of payment on a given

[1] *Bankers Magazine,* London, March, 1923.

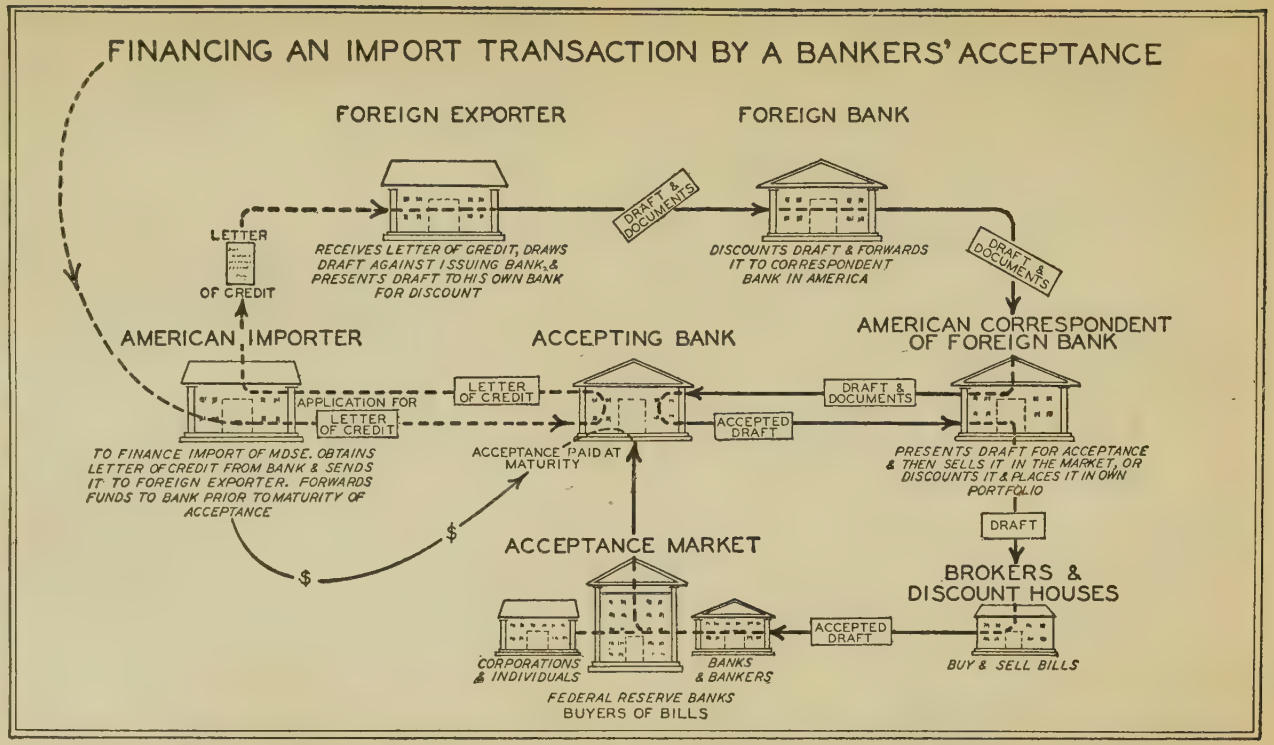

FINANCING AN IMPORT TRANSACTION BY A BANKERS' ACCEPTANCE
FOREIGN EXPORTER
FOREIGN BANK
LETTER OF CREDIT
RECEIVES LETTER OF CREDIT, DRAWS DRAFT AGAINST ISSUING BANK, & PRESENTS DRAFT TO HIS OWN BANK FOR DISCOUNT
DRAFT & DOCUMENTS
DISCOUNTS DRAFT & FORWARDS IT TO CORRESPONDENT BANK IN AMERICA
DRAFT & DOCUMENTS
AMERICAN IMPORTER
ACCEPTING BANK
AMERICAN CORRESPONDENT OF FOREIGN BANK
APPLICATION FOR LETTER OF CREDIT
LETTER OF CREDIT
DRAFT & DOCUMENTS
ACCEPTED DRAFT
TO FINANCE IMPORT OF MDSE. OBTAINS LETTER OF CREDIT FROM BANK & SENDS IT TO FOREIGN EXPORTER. FORWARDS FUNDS TO BANK PRIOR TO MATURITY OF ACCEPTANCE
$
$
ACCEPTANCE PAID AT MATURITY
PRESENTS DRAFT FOR ACCEPTANCE & THEN SELLS IT IN THE MARKET, OR DISCOUNTS IT & PLACES IT IN OWN PORTFOLIO
DRAFT
ACCEPTANCE MARKET
BROKERS & DISCOUNT HOUSES
ACCEPTED DRAFT
CORPORATIONS & INDIVIDUALS
BANKS & BANKERS
BUY & SELL BILLS
FEDERAL RESERVE BANKS
BUYERS OF BILLS

DIAGRAM 22—ILLUSTRATION OF THE FINANCING OF AN IMPORT TRANSACTION BY A BANKERS' ACCEPTANCE.

date, and this guaranty can be sold. The guaranty takes the form of a bill of exchange: a draft drawn by the seller on the buyer's bank, on which the bank has put its stamp "accepted." The accepted draft has a ready sale to banks and others, for its goodness and prompt payment are assured both by the bank's guaranty and the self liquidating nature of the underlying transaction. Thus, the seller can get his money in a transaction before the buyer is ready to pay. In import and export trade, the bill ordinarily covers the length of the voyage plus the usual credit terms of the trade, in all a period usually from three to six months. There are many forms of bank acceptances and detailed regulations as to their use, but they are variations of the form just outlined. A typical acceptance transaction is traced in Diagram 22.

Who Uses Bills?—As illustrated by Diagram 23, bankers' dollar acceptances until about the middle of 1929 were used primarily to finance import and export movements to and from the United States, although substantial amounts were also drawn against domestic storage of readily marketable staples. Drawings representing domestic shipment of goods have never been large in comparison with the other types of acceptance financing but have remained relatively constant. Starting about the middle of 1927 efforts were made to improve the American export trade, especially the foreign market for raw agricultural products. To assist in the furtherance of this object the Federal Reserve Board liberalized to some extent its rulings relative to acceptance regulations. The effect of this policy was to augment the growing volume of bills financing goods stored in or shipped between countries other than the United States. By December of 1930 this type of business alone reached a peak of about $560,000,000, forming about 36 per cent of the total dollar acceptances outstanding. By 1935 the amount of these bills was considerably reduced, but they still constituted 21 per cent of the total. Comment will be made later as to the character of these bills.

A detailed classification by commodities of all the bills purchased by the Reserve Banks in the year 1926 (exclusive of those acquired under repurchase agreement), as shown in Dia-

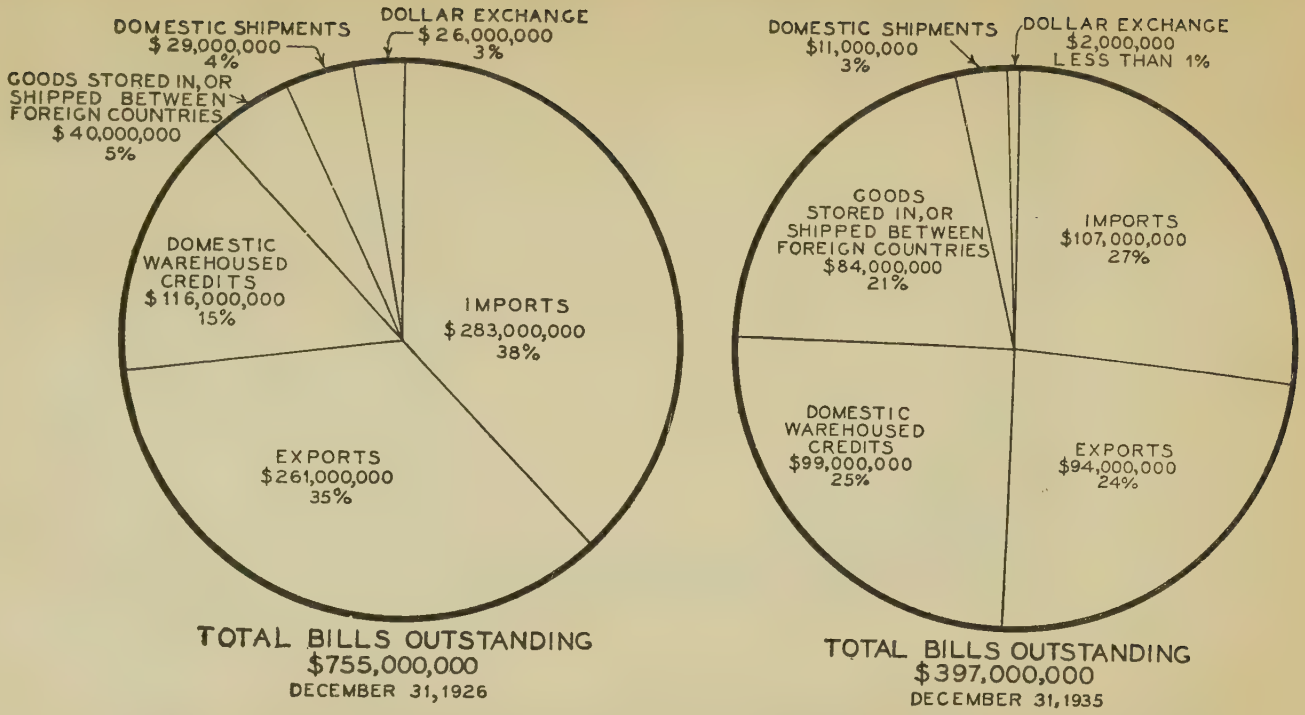


DIAGRAM 23—TRANSACTIONS FINANCED BY BANKERS' BILLS OUTSTANDING AT THE END OF 1926 AND 1935.

gram 24, enables us to say still more precisely how bills have been used to finance trade. These bills purchased by the Reserve Banks may be considered as representative of all the bills outstanding. The analysis shows that more than one-third of these acceptances were drawn to finance the movement or

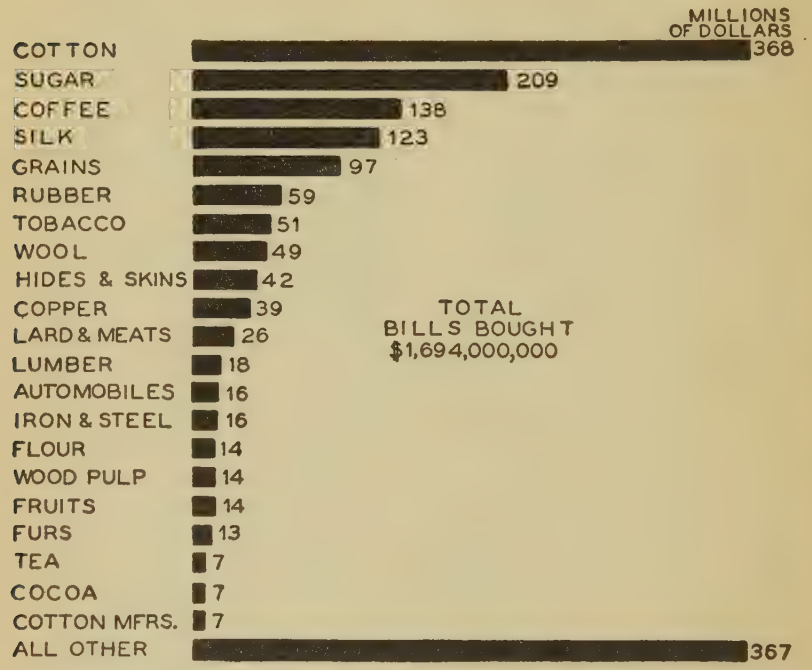


DIAGRAM 24—FARM PRODUCTS RANK HIGH IN THE LIST OF COMMODITIES THE MOVEMENT OR STORAGE OF WHICH WAS FINANCED THROUGH BILLS PURCHASED OUTRIGHT BY THE RESERVE BANKS DURING 1926.

storage of American farm products. A large part of the total was drawn to finance the movement or storage of a single commodity—cotton; the second largest commodity was sugar; then came bills to finance coffee, silk, and grains.

Similar analyses were made for later years but were confined to bills purchased by the Federal Reserve Bank of New York for the System. Again cotton bills predominated, followed in order of importance by drawings against sugar, grain, coffee, iron and steel, and silk. The general list of uses is not greatly changed.

The type of transaction financed through the bill market is in large measure different from the trade activity financed through the commercial paper market. As contrasted with the facts just cited and the figures shown in Diagram 24, it is estimated by the National Credit Office that about one-third of the concerns using commercial paper are in the textile industries, while the next largest groups deal in foodstuffs, metals, and leather. These divisions have shown little change for a number of years. Generally speaking the commercial paper market finances domestic manufacture and trade, whereas the bill market finances more largely the storage and movement of raw materials and foodstuffs, particularly in foreign trade. Commercial paper is issued against the general credit of the concerns using the market, whereas each bankers' acceptance, except bills drawn to provide dollar exchange, represents the storage or transit of specific articles of agriculture, commerce, or industry.

From these differences in type of financing there arise certain interesting differences in the activity of the two markets. Financing in the commercial-paper market is rather evenly distributed throughout the year but tends to be most active in the spring or early fall, when spring and fall trade are most active. On the other hand, the bill market is highly seasonal and experiences its largest volume of financing in the late fall and winter, when the movement and storage of crops is largest, and when the largest exportation of cotton is under way.

Service to Trade.—The most direct and obvious effect of the establishment of a bill market in this country has been its benefit to those who deal in the commodities listed in Diagram 24.

Domestic transactions now handled through the bill market were previously financed largely by direct loans at banks, frequently with some difficulty and at higher rates. Through the bill market cooperative marketing associations and cotton and grain dealers are able to tap more readily the supplies of funds in the central money markets.

For example, the New County Farmers' Association desires to hold 2,000 bales of cotton in storage temporarily, to assure

its orderly marketing but requires immediate funds for its members. In the early fall when demands for funds for picking and transportation are heavy, the local New County banks may not be in a position to make the required loans on the cotton, even at high rates. If the cotton is stored in warehouses independent of the borrower, acceptance credit secured by the cotton can be obtained from one or more well-known accepting banks. The association draws drafts on these banks payable in ninety days and takes them to the banks, together with the warehouse receipts. The banks hold the receipts and write "accepted" across the face of the drafts which are then returned to the association. The banks thus become liable for the amounts of the drafts and hold as security the warehouse receipts. For their service and the loan of their credit the accepting bank ordinarily charges 1½ per cent per annum. The Association holds the accepted drafts, which may be sold readily in the nearest money center at a discount equal to the lowest current rate for money. Thus the Association obtains for its members the immediate use of funds at low rates. Without the bankers' acceptance the funds would ordinarily be more expensive and might often be difficult to secure. The acceptance is a means of breaking down in some degree the barriers between country districts and central money markets.

The central money markets thus share with the local bank the financing of agriculture. The planting and harvesting of the crop are financed by local banks which in turn lean upon the regional Federal Reserve Banks. The storage of the crop, and its movement to market, may be financed through acceptances by the central money markets, which in their turn lean upon the regional Federal Reserve Banks.

For the American exporter or importer the bill market is a great convenience. Formerly it was usually necessary in financing exports and imports to make arrangements to draw drafts on some English or continental bank. The trader had to take the risk of loss on fluctuations in sterling exchange, or else incur the expense of buying forward cover. The European bank collected the commission and discount. It is now possible to carry forward the whole transaction with an American

bank. There is no risk of exchange and the American bank earns the commission and discount formerly collected by others. In addition the holder of surplus funds is enabled to obtain an investment of almost complete safety and liquidity.

Depression Test of Bills.—The depression put to a severe test the goodness of the bankers' acceptance. At a time when large losses were being taken on all forms of loans and investments the question was whether the acceptance, an instrument designed to secure the maximum of safety by reason of the self-liquidating character of the underlying transaction, would prove sound. Generally speaking the results were very satisfactory and the losses to accepting banks were almost negligible with one important exception, the so-called "standstill" bills, about which something should be said.

Early in 1931, economic conditions abroad, particularly in Germany, Austria, and Hungary, became increasingly precarious and bankers the world over withdrew credit from these countries. Indeed, by early summer of 1931 withdrawals had reached such proportions that the ordinary financial mechanism for international payments broke down. The gold and foreign exchange reserves of the banks of issue of those countries were at the point of exhaustion and foreign obligations could no longer be met when they matured. As a result there were devised the so-called Standstill Agreements of which that with Germany was the most important, and more or less typical of the Austrian and Hungarian agreements. The purpose of these agreements was to provide for the orderly and gradual liquidation of credits to those countries without disrupting their overseas trade or depreciating too severely the international value of their currencies. Under these arrangements foreign creditors agreed under certain conditions to provide for the continuation of the then existing amounts of certain classes of short-term credit to their customers abroad, chiefly banks. These banks in turn, while remaining primarily liable, placed these credits at the disposal of their commercial and industrial customers.

The scrutiny to which these Standstill credits became subjected revealed the fact that owing largely to price declines

and decreases in the volume of foreign trade, some part of the bills drawn under them was open to criticism as being in reality finance paper; that is, constituting in effect loans to provide working capital without relation to any specific underlying commercial transaction the proceeds of which could be expected to liquidate the bill at maturity. Losses to accepting banks on this score, however, particularly in Germany and Austria, have been almost negligible, for as a rule the foreign debtor has been able to meet his obligations at maturity in his own currency. What losses have developed have been due almost wholly to the difficulty of getting funds out of the central European countries under existing exchange regulations. The character of bills drawn was important principally for its effect on the total volume of such obligations of these countries, which proved excessive.

In midsummer of 1931, the aggregate dollar acceptance credit extended under Standstill Agreements to Germany, Austria, and Hungary was about 460 million dollars. These credit lines had been gradually reduced to approximately 150 million dollars, as of December, 1935. Actual use, although subject to fluctuation, has been somewhat less than the maximum possible under the agreements. Liquidation has been brought about in accordance with the terms of the Standstill Agreements, i. e., by cancellation of portions of credit lines, payments in dollars, and payments in currencies of the debtor countries. Payment was facilitated by devaluation of the dollar. While no precise figures are available, the fact that the debtors' currencies referred to, usually of a "blocked" or restricted character, in most cases could only be converted into currency of the creditors at varying rates of discount caused creditors to suffer a substantial loss though it is safe to say that the loss has been much smaller than was at first anticipated. The loss in each case has fallen on the accepting bank and not on an investor holding an acceptance. It appears still to be true that no investor in a bankers' acceptance drawn in dollars has taken a loss in principal.

Who Buys Bills?—The advantage of the bankers' acceptance to the business man or farmer whose transaction is

financed is perhaps more obvious than the advantage to the buyer of bills. Why should anyone buy bills yielding less than could be obtained from commercial paper or stock exchange call money? Part of the answer may be found in an inspection of the safety and convenience with which funds may be employed in the different short-term money markets.

We now have in this country, as was indicated in Chapter IX, four markets in which surplus funds may be employed for short periods:

1. Stock exchange money market.
2. Commercial paper market.
3. Short-term government security market.
4. Bill market.

The first two of these markets have been here for many years; the latter two are of relatively more recent development. Generally the rates in the first two of these markets are near together and from ½ per cent to 1 per cent above the rates in the third and fourth. The short-term government market and the bill market justify low rates in two particulars. First, they offer unusual security: in one the obligation is that of the government; in the other the obligation is that of a bank of recognized standing. Second, funds placed in either of these markets may be withdrawn at any time by the sale of the instrument to a dealer, or, under certain conditions, to a Federal Reserve Bank. Both are "two-way" markets in the sense that government obligations and acceptances can be sold to the market as well as bought. This is in contrast with commercial paper, which ordinarily must be held until maturity, unless it is rediscounted by a commercial bank at a Reserve Bank. The call money market is in effect a "two-way" market because funds placed in it can usually be withdrawn readily, but call loans cannot be sold to the Reserve Banks or rediscounted with them, except possibly under the new provisions for advances to banks on ineligible paper.

Short-term government securities and acceptances carry low rates because of their practically complete security and liquidity. They have proved acceptable investments for those

who have funds to employ for limited or uncertain periods and wish the maximum safety and availability.

Some time ago an inquiry was made by the New York Reserve Bank to ascertain just who the buyers of acceptances were, other than such well-known buyers as city and country

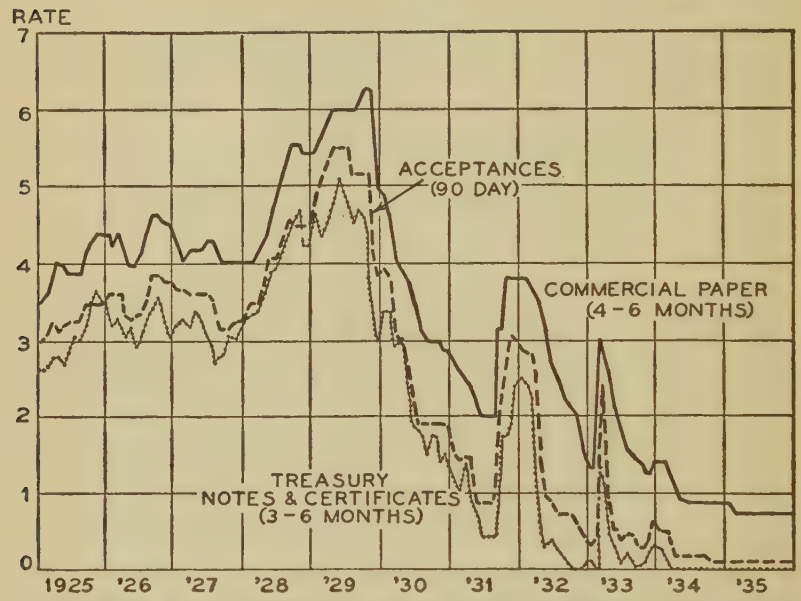


DIAGRAM 25—OPEN-MARKET RATES FOR BILLS AVERAGE ABOUT ONE PER CENT UNDER COMMERCIAL-PAPER RATES AND ARE CLOSE TO THE RATES ON SHORT-TERM GOVERNMENT SECURITIES.

banks, savings banks, and insurance companies. Among the buyers mentioned by discount houses were the following:

Salt, iron, and petroleum companies in California.
A creamery and a telephone company in Colorado.
A hospital and various manufacturing plants in Connecticut.
Cotton mills in Georgia.
Many concerns in Illinois, ranging from publishing houses to manufacturers of screen doors.
A lumber mill in Indiana.
Elevators and milling companies in Kansas.
Manufacturing concerns and municipal finance boards in Maine.
An athletic club in Maryland.
A linseed company in Minnesota.

Coke and chemical concerns in Missouri.
Butchers, laundrymen, and a boys' club in New York.
A varied range of buyers from steel companies to sanitariums in North Carolina.
A coal miners' mutual association in Pennsylvania.
A Utah candy company.
Texas cotton companies.
A feed store in West Virginia.
A dairy farm in Wisconsin.
Also, scattered throughout the country, trustees of Protestant churches, bishops of Roman Catholic dioceses, the Salvation Army, colleges large and small, lodges of Elks, and other fraternal and welfare organizations.
Also, very large purchases of bills by foreign governments and by foreign banks having branches in this country, many foreign banks in cities as widely separated as Constantinople and Tokyo, as well as many individuals in England, Switzerland, Holland, and other foreign countries.

Under depression conditions, the very low rates at which bills have been sold have limited the market and the list of buyers would be much shorter. These conditions however are presumably temporary.

Place of the Reserve Banks.—The list of buyers of bills is not complete without including the Federal Reserve Banks, for these banks usually hold considerable portfolios of bills and at certain times in the past have held as much as half of the bills outstanding in this country, though at times of very easy money conditions holdings have been negligible. The method by which large holdings were acquired and the results of their purchase constitute a little understood but interesting phase of money market operations.

Over a period of years, from one-third to one-half of the bills held by the Reserve Banks (including bills under contract of the seller to repurchase) have been purchased from houses which deal in bills; and the remaining bills have been purchased from banks. If bills purchased under repurchase agreement are excluded, not far from three-quarters of all bills held have been purchased from banks. It may be well to discuss first purchases from dealers because those purchases make possible the continued existence of a bill market.

As will be seen from an examination of how the market works, the bill market could not exist without the Federal Reserve Banks, just as the bill market in London could not exist without the Bank of England. The bill market is dependent upon the existence of dealers who stand always ready to buy and sell bills and who carry an assortment of bills on their shelves, just as a grocery store carries groceries. But bills are expensive commodities to keep on one's shelves. Ordinary capital funds cannot be invested largely in securities which yield 3 or 4 per cent or less; the bill dealer to carry his stock in trade requires a constant supply of borrowed money at low rates.

The practice is for the dealer to borrow from day to day in the money market most of the money with which he carries his stock. Ordinarily, the bill dealer can obtain call money at a rate about ¼ to ½ per cent under the quoted market rate for call money because of the type of security he offers. But there are often times in the money market when money is not available at low enough rates; at these times the dealer needs some place of refuge where he may obtain funds to tide him over the temporary period of stringency. The Federal Reserve Banks furnish that place, for they stand ready to buy bankers' acceptances at their current buying rates. Though differing in detail, the practice of the Reserve Banks in this regard is similar in principle, to the practice of the Bank of England, which stands ready to buy bills from the London bill dealers at its current discount rates.

In addition to the unconditional purchase of bills from dealers, the Reserve Banks at times buy bills from them under repurchase agreement, or "sales contract," by which the dealer agrees to repurchase the bills within fifteen days. This arrangement is the same as that made from time to time with dealers in government securities, mentioned in Chapter VII.

The majority of bills purchased outright by Reserve Banks are purchased from banks, and here again the initiative is taken by the sellers. The Reserve Banks stand ready to buy bills at their current buying rates from banks as well as dealers, but do not ordinarily go into the market offering to pur-

chase bills for their own account. It is the policy of Reserve Banks to buy only bills which bear satisfactory banking indorsement, in other words, three name paper. Furthermore either the acceptor or indorser must be an American bank. Likewise as a matter of practice the Reserve Banks never sell bills from their portfolios, but hold them until maturity.[2]

The sale of bills to the Reserve Banks is a convenient way for banks to adjust their reserve positions. Reserve Banks as a matter of policy do not buy directly from an accepting bank the latter's own bills. If a bank has been losing funds through currency withdrawals, out-of-town transfers, or any other withdrawal of deposits, it may restore its reserve position quickly by selling with its endorsement to its Reserve Bank bills which it has previously purchased in the market. The bank thus obtains reserve funds without becoming a direct borrower from the Reserve Bank. Many banks keep portfolios of bills primarily because they offer so convenient a means for adjusting their reserve positions. It is through transactions of these sorts that the bill portfolios of the Reserve Banks are principally built up.

Reserve Banks, as a rule, when accepting offerings of bills for their own account only take "seasoned" bills, that is bills which have been held in the market for some time and which as a consequence are approaching maturity. This avoids dumping of newly accepted paper on the Reserve Banks where it would be held until maturity, for as has been said, Reserve Banks do not sell bills. The maturity of the bill holdings is reported each week in the press statement. The report for December 30, 1931, shows, for example, the following figures for the amounts maturing within specified numbers of days. This illustration may be taken as typical during normal money market periods.

[2] The Reserve Banks for some time have purchased abroad through correspondent central banks small amounts of foreign currency bills of the same type as the dollar bills purchased in our own market, and more substantial amounts at certain times in connection with credits for foreign central banks. Reserve Banks also occasionally purchase with banking indorsements trade bills, i. e., commercial bills of exchange, the acceptors of which are not bankers but merchants of approved credit standing. The purchase rate for such paper is somewhat higher than for prime bankers' acceptances.

Bills maturing within 15 days	$192,000,000	58.7%
Bills maturing in 16 to 30 days	64,000,000	19.6
Bills maturing in 31 to 60 days	51,000,000	15.6
Bills maturing in 61 to 90 days	19,000,000	5.8
Bills maturing in 91 days to 6 months	1,000,000	0.3
Total holdings	$327,000,000	100.0%

The portfolio of bills held by the Reserve Banks thus tends to be made up largely of short bills, and the whole portfolio turns over rapidly.

Results to Money Market.—When the establishment of a discount market in this country was discussed prior to the passage of the Federal Reserve Act, the convenience which such a market might offer to trade and to the investor was emphasized. But even greater emphasis was laid on the reforms in the money market which a discount market might be expected to bring about. The hope was expressed by some that the development of a discount market might reduce the flow of liquid funds into the stock exchange money market and diminish the extent of speculative activity. No such development took place. The bill market has grown up beside the call market without revolutionizing the character of the older market. Rates for stock exchange money are in general somewhat steadier than they were, and the supply of funds is perhaps somewhat less volatile, but this market continues as in the past to be a large field for the employment of liquid and surplus funds. Perhaps the principal change in these market relationships has been a tendency for commercial credit to be a little cheaper and credit for the security markets to be a little dearer than before, as will be discussed more fully later.

It is conceivable that gradual changes in practice and larger experience with the bill market may in time lead to a much larger volume of bills and a larger flow of funds into that market as compared with the stock exchange money market, particularly as the amount of margin trading may be reduced by its regulation under the Securities Exchange Act of 1934. But on the basis of the experience up to this time the prin-

cipal changes in the money market, which may be ascribed to the influence of the bill market, are in two other directions.

In the first place, the bill market provides a medium by means of which additional Federal Reserve credit is obtained in time of temporary money strain and returned when the strain is passed. If the money market incurs a loss of funds so that bank reserves are impaired, the banks promptly sell bills to the market or to the Reserve Banks. If the dealers

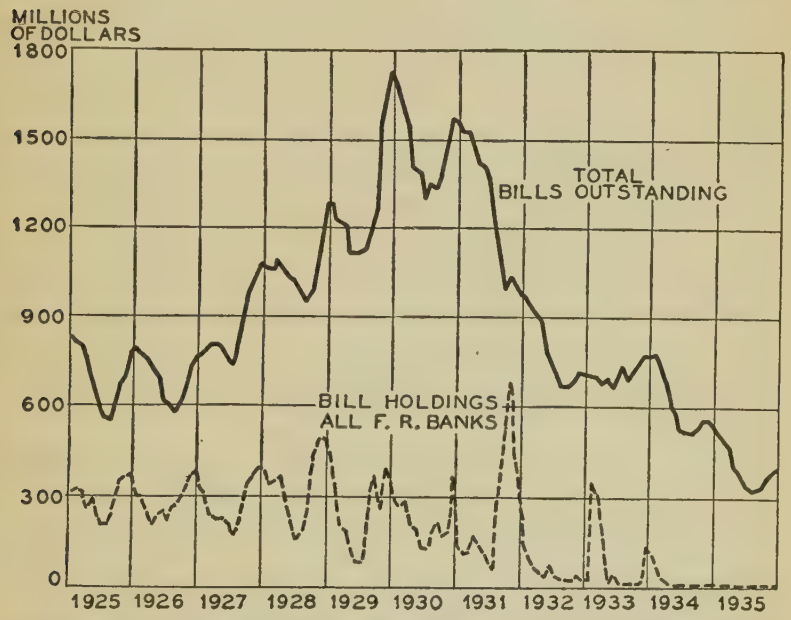


DIAGRAM 26—HOLDINGS BY THE RESERVE BANKS OF BILLS BOUGHT IN THE OPEN MARKET REFLECT SEASONAL TRADE ACTIVITY AND CHANGES IN CREDIT CONDITIONS.

find funds difficult to obtain at reasonable rates, they sell bills to the Reserve Banks either outright or under repurchase agreement. Reserve Bank credit is thus drawn into the market and eases the strain. As soon as the situation is relieved the portfolios of the Reserve Banks decline, as maturities each day exceed new offerings, and the dealers take back bills sold under repurchase agreement, since they can again find money elsewhere at cheaper rates to carry their portfolios.

The way in which the bill holdings of the Reserve Banks

respond to changing trade and credit conditions is illustrated by Diagram 26, which shows the System's holdings of bills during recent years in comparison with the total volume of bills outstanding. Every fall when trade calls for the largest use of credit and currency, the amount of bills in the market increases and bill holdings of the Reserve Banks tend to increase. After the turn of the year they decrease. In periods of easy money, as in 1933, 1934, and 1935, Reserve Bank holdings are small, and in periods of firmer money they increase. Through the bill market Federal Reserve funds flow into the market or out of it without as much pressure on the market as is involved in direct borrowing by member banks.

It is worthy of note in passing that in periods of extremely easy money the tendency is for accepting banks to discount and hold in portfolio their own acceptances. Since March, 1933, their own acceptances held by accepting banks have ranged from about 30 per cent to 45 per cent of the total outstanding. It should also be noted that acceptances held in this way are a less liquid instrument than acceptances of other banks, because they cannot be sold directly to the Reserve Banks.

A second consequence of the presence of the bill market is that it facilitates a freer flow of funds and closer relations between this country and foreign money centers. Foreign bankers are accustomed to buying bills, not only in their own markets but in foreign markets as well, where bills offer valuable employment for the foreign exchange reserves which they must constantly maintain abroad. In past years many foreign banks have established agencies here and large amounts of foreign money have been invested here in bills.

The presence of the bill market improves the mechanism for the free movement of funds and adjustment of the exchange between our own and other countries, though the events of recent years have for the time being imposed on movements of this sort the barrier of lack of confidence between countries. The use of dollar bills in financing trade with other nations has broadened the market for dollar exchange in foreign centers, it has increased the contacts be-

tween our own and foreign banks, and brought our banks considerable business.

As to the Future.—The development of the bill market in this country is far from complete. There are domestic transactions which in normal times might be financed through the bill market more advantageously than by the methods now employed. The limitation is principally lack of knowledge of the bankers' acceptance and the persistence of old habits.

The market for bills in this country has at times been rather narrower and more dependent upon the Federal Reserve Banks than could be desired. No small proportion of the purchase of bills in the New York market has usually been for foreign account in employing the large balances maintained here by foreign banks, corporations, and individuals. While domestic buyers of bills cover a wide range of concerns and individuals, the market would often have been narrow if it had not been for the buying for foreign account. In marked contrast with the practice of British banks which carry large amounts as a secondary reserve, there are comparatively few American banks which carry large bill portfolios. A part of this difference is due to the fact that bills, or money lent to bill dealers, constitute the principal means by which British banks replenish their reserves. The bills can always be allowed to mature or the money called. The British banks do not borrow directly from the Bank of England. In this country, on the other hand, the member banks borrow directly from the Reserve Banks with some freedom. American banks, therefore, do not have the same incentive for buying bills as do the British banks.

Moreover, in this country, the bill market is in continuous competition for funds with the stock exchange money market, which offers almost as much liquidity, usually a somewhat higher rate, and perhaps somewhat greater facility in handling, because it is easier to check over stock exchange collateral offered as security for a loan than a bundle of bankers' acceptances of odd amounts coming from the four corners of the earth. The short-term government security has been another important competitor with the bill market for funds.

Furthermore, there has until recently been no such supply of surplus money in this market available at a low rate for use of the bill dealers as there usually is in London. Here, under what have been considered normal conditions, surplus money has tended to flow back promptly to the Reserve Banks, since some banks have almost always been in debt at the Reserve Banks and anxious to repay the debt.

For these various reasons the bill market has at times been so dependent upon the Reserve Banks as to interfere somewhat with the execution of Federal Reserve policy. For at times the necessary support of the bill market has called into use a somewhat larger amount of Federal Reserve money than otherwise seemed desirable. This may be illustrated by the experience of the Reserve System in the autumn of 1928. In order to combat a tendency towards over-expansion of credit for speculative use the Reserve Banks had in the early months of that year increased their discount rates by successive steps, and through the sale of government securities had forced the banks to be large borrowers from the Reserve System. The pressure of heavy borrowing at relatively high rates led the banks to consider with care every further extension of loans and thus maintained a desirable pressure upon speculative tendencies.

During this period it was desired by all that essential business enterprise and particularly agriculture and foreign trade should receive their requisite supply of credit. For that reason it seemed important to give the bill market support, and as usual the Reserve Banks stood ready to buy bankers' acceptances at current buying rates, somewhat under the discount rate. But, with the bill window freely open, banks and dealers brought large amounts of bills to the Reserve Banks, with the consequence that enough reserve money was thus put into use to enable the banks to repay some of their borrowings at the Reserve Banks. This action tended to ease somewhat the pressure upon the speculative situation. The Reserve System found itself in a most difficult dilemma. It could not keep money freely available for business through the acceptance market without defeating somewhat its policy

of maintaining pressure upon speculative tendencies. From the point of view of hindsight it would perhaps have been better for the Reserve System to have purchased bills less freely and maintained the maximum pressure.[3]

This kind of situation indicates the importance in the future of gradually building up the bill market to a position of greater strength and independence from the Reserve System, though the dilemma which the Reserve System faced at that time is one which can never be wholly avoided. From a long range point of view it is desirable that the bill market be so firmly established that the rate at which the Reserve Banks will buy bills may be more of a penalty rate, which can only be possible if the money market banks give more vigorous support to the bill market. This in turn is hardly a problem in philanthropy but is one which may be considerably influenced by the general rate structure of the Reserve System. If it were possible, for example, to maintain the discount rate at a higher level relative to the market, the banks might find it more desirable to maintain large portfolios of bankers' acceptances as the cheapest means for obtaining Federal Reserve funds in times of need. Money market conditions have been so altered by the huge excess of reserve funds at the time this book is being revised, and future money market relationships are so uncertain, that this problem may simply be classified as one for later consideration.

The present small volume of bankers' acceptances outstanding might perhaps lead some to the conclusion that this credit instrument after a twenty year trial in this country has been found wanting and was likely to pass into disuse. That conclusion is at least premature. The decline in volume of bills from $1,700,000,000 to less than $400,000,000 is due to specific causes including a reduction of two-thirds in world trade, a severe decline in commodity prices, and an abnormal money situation which has converted into the form of direct loans considerable amounts of credit formerly extended through the bill market. With the gradual return of more

[3] This question was discussed by the writer at the time in an address before the American Acceptance Council, published in the *Acceptance Bulletin* of the American Acceptance Council of December, 1928.

nearly normal conditions there is every reason to suppose that the bill market will be restored to something of its former position.

SUMMARY

1. Since the establishment of the Federal Reserve System, a new money market, the bill market, has grown up in this country and is now larger than the commercial-paper market.
2. The bankers' bill provides a means by which, through the use of bank credit, the seller of goods may receive immediate payment for goods shipped before the buyer has received or paid for the goods.
3. More than one-third of the bills drawn in this country are drawn to finance the storage or movement of American farm products.
4. The bankers' bill enables the farmer to tap central money-market funds to store or move his harvested crops. It makes credit available at lower rates. It provides exporters and importers convenient means of financing their transactions.
5. The bankers' bill is a form of investment of almost complete safety and liquidity and despite low rates is therefore attractive for the employment of temporarily surplus funds.
6. By standing ready to buy bills at currently established rates the Reserve Banks support the bill market.
7. The bill market provides a medium by which additional Federal Reserve funds are put into the market at times of strain, and withdrawn at times of ease.
8. The presence of an American bill market encourages a freer flow of funds between this and other countries and aids in making the money market international in scope.
9. The dependence of the bill market on the Reserve Banks at times when a restrictive credit policy was desirable has on occasions constituted something of a problem. In the long run greater independence of the bill market is desirable.

CHAPTER XI

Bank Reserves as a Key to Money Market Changes

TRADITIONALLY, the money market is thought of as an aggregation of a number of markets where liquid funds are employed in the purchase of short-term securities, or in advances against stock and bond collateral; in fact the structure of the money market was described in these terms in Chapters IX and X. In this chapter an entirely different approach is suggested and attention is devoted to an analysis of the movement of the reserves of New York City banks. The reason for this procedure is not obvious on its face. The total amount of funds of every character employed in the New York market is difficult to estimate, but has probably mounted as high as 8 to 10 billion dollars, whereas the reserves of New York City banks at the peak in 1929 were but 982 million dollars. But the significant fact is that practically every movement of consequence in the whole money market is reflected either in the reserves of individual city banks or in the aggregate of the reserves of all. This is because bank reserves are not static but are clearing funds through which are settled the transactions which each bank has with all other banks.

Reserves Reveal Changes.—Practically no money market transactions are carried on with currency or coin; the banks and others keep small amounts of currency for uses quite apart from the money market such as the payment of wages and pocket money; but money-market business is transacted by checks which are drawn on bank deposits which in their turn are supported by bank reserves. When, for example, William Smith buys securities from Peter Jones he gives him a check on Bank A. Peter Jones deposits the check in Bank B, and unless there are offsetting transactions Bank A has to pay Bank B in the clearing house settlements next morning.

Without other transactions this means a transfer of funds from the reserve account of Bank A in the Reserve Bank to the reserve account of Bank B, without any change in total deposits. If Smith has to borrow from his bank to buy the securities, the total of loans and hence of deposits, is increased and bank reserves must be increased to meet legal requirements, unless there is a corresponding liquidation of some other loan with corresponding deposit reductions. The net of all such transactions is reflected in the required and actual amounts of bank reserves. Gold movements, currency drawn into or returned from circulation, movements of funds to and from the interior—all these are reflected in bank reserves.

The New York Federal Reserve Bank is in an advantageous position to observe the movements of the money market as reflected in bank reserves, for practically all the large New York City banks are members of the Federal Reserve System and carry their reserves with the Reserve Bank. Thus it holds nearly all the ultimate bank reserves which are back of the credit used by the New York money market. The Bank is thus, in a sense, bookkeeper for the New York money market.

Taking advantage of this unusual opportunity the New York Reserve Bank began more than ten years ago a study of money market movements as they found their reflection in the reserve accounts of the New York City banks. The result has been to set up a current analysis of changes in reserves which shows the officers of the bank, daily and even hourly the principal movements of funds in the money market. In 1930 this general method of analysis, which may be thought of as a reserve-accounting method was applied to the weekly bank statement published by the Federal Reserve System, and a separate table included showing changes in the amount of Reserve Bank credit outstanding and in related items.[1]

[1] This approach was described by the writer in an article in the Harvard *Review of Economic Statistics* January, 1926, entitled "An Analysis of Changes in the Money Market," which formed the basis for this chapter. A full discussion of the method as applied on a national basis may be found in Winfield Riefler, *Money Rates and Markets in the United States,* Harpers, New York, 1930. See also articles on "Change in Form of Weekly Statement of Condition of Federal Reserve Banks" in the *Federal Reserve Bulletin* June, 1930, on page 341, and on "Supply and Use of Member Bank Reserve Funds" July, 1935, p. 419, available in reprint form.

The starting point in any study of reserves, from this approach, is the relation between actual bank reserves and the legal requirements as set forth in Chapter III.

Diagram 27 illustrates for a typical period of two months the movement of reserves of New York banks compared with requirements.[2] The line which consists of a series of plateaus represents the reserve requirements of twenty-three of the largest New York City banks, which deal most largely in money-market funds. Under the Federal Reserve regulations as to reserves which prevailed until January, 1928, the banks computed their required reserves each week for the period from Saturday through Friday. For this period the New York City banks were required to maintain average reserves equal to 13 per cent of their average daily net demand deposits, plus 3 per cent of their average daily time deposits. The line for required reserves is, therefore, a straight line for the week, running from Saturday to Friday.

The fluctuating line on the diagram shows the average daily reserves actually carried from the beginning of the reserve week. The figure for Wednesday, for example, is the average reserve for five days from Saturday through Wednesday. The average on Friday must, in compliance with law, be as high as the figure for required reserves. It will be noted on the diagram that this is what actually occurred at the end of each week: the average line is a little above the requirements line. Banks planned to use their funds to the maximum and hence there was seldom any large excess of reserves above requirements at the end of the week.

Diagram 27 brings out an important fact about movements of bank reserves: that reserve requirements change slowly and move within a comparatively narrow range, for being only a percentage of deposits they change by smaller amounts than

[2] For this and later illustrations the same year is used as in the earlier edition of this book, partly to avoid the distortion of abnormal surplus reserves of recent years and partly to go back to a period when the reserves were computed once a week rather than twice a week as at present. The once a week adjustment accentuated the swings, and figures for that period magnify the relationships in which the student is interested and make them easier to observe. One of the objects of shortening the reserve computation period was to damp down these swings.

deposits themselves. There is a much larger fluctuation in actual or average reserves which reflect directly the movement of deposits.

Reserves and Money Rates.—The intimate relation between bank reserves and money market conditions may be illustrated by a comparison of the day-to-day movement of reserves and the call-loan rate, which is usually the most sen-

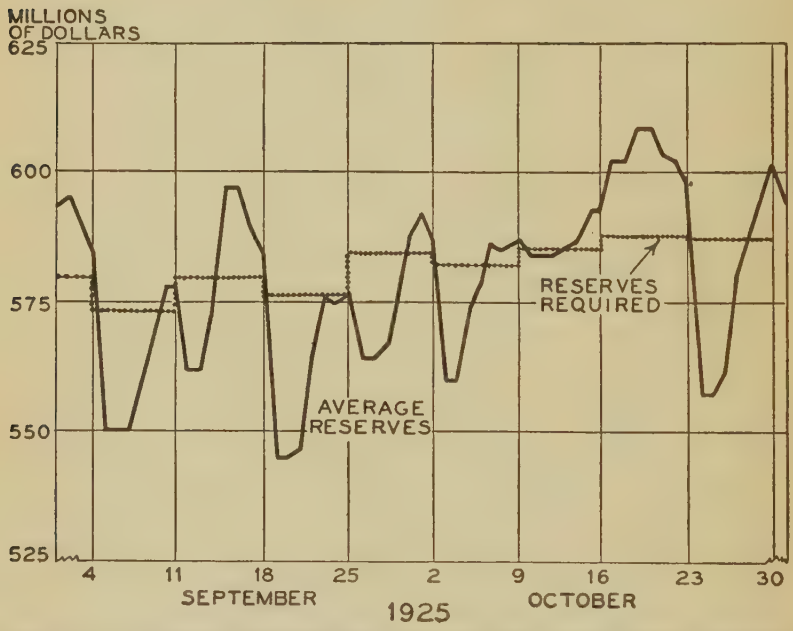


DIAGRAM 27—AVERAGE RESERVES OF 23 NEW YORK CITY BANKS COMPARED WITH RESERVE REQUIREMENTS.

sitive index of money market conditions. Such a comparison is made in Diagram 28. The figures for reserves are here shown in terms of accumulative excesses above or deficiencies below requirements. For example, if actual reserves were 10 millions below requirements for three successive days, it is shown as a total deficit of 30 millions. To put it another way, the diagram shows how much had to be added to reserves or subtracted from reserves on any one day to bring average reserves exactly to the required amount.

It is clear from the diagram that call rates and bank re-

serves showed an inverse relationship. When accumulated reserves for the week were below requirements call money rates tended to be high, and when accumulated reserves were above requirements call money rates tended to be low.

There is nothing mysterious or remarkable about this close relationship between rates and reserves, if one thinks of what actually happens in the banks concerned. In each of the large New York City banks there is some person who is responsible

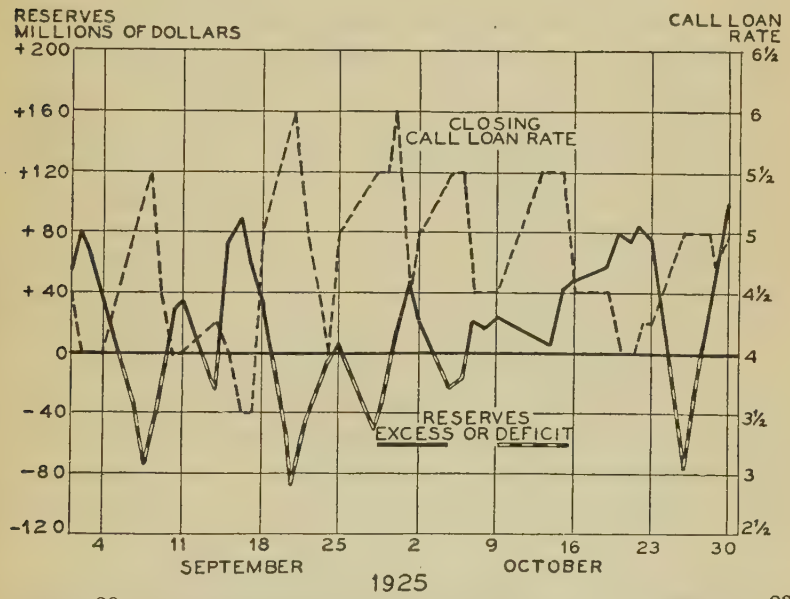


DIAGRAM 28—DAILY ACCUMULATED EXCESS OR DEFICIT IN RESERVES OF 23 NEW YORK CITY BANKS AND THE CLOSING CALL-LOAN RATE.

for maintaining the bank's reserve position. To his desk flows a stream of current information as to any important changes in the bank's reserves, its deposits, or its loans. It is he who handles the bank's most flexible funds, which are employed mostly in call loans, holdings of bankers' acceptances, and Treasury notes and bills. If this officer finds on a certain morning that his average reserves for the week to date are below requirements he looks about for a means of building up these reserves. The call-loan market at the time of our illustration was the principal market through which reserve adjustments

took place, and so it was a natural thing for this officer, after consultation with other officers of the bank, to call enough loans in the stock exchange money market to bring in the funds required. If other banks were in a similar position, it is clear that the result was to raise the rate for stock exchange money, and make money "firmer." Conversely, when bank reserves were above requirements, funds were placed on the market and rates declined; money was "easier."

There are other methods of adjusting reserves besides the shifting of funds to and from the call market. Maturing loans may or may not be replaced, acceptances, United States securities, or other securities, may be bought or sold, or paper may be rediscounted at the Reserve Bank. The practices of different banks in adjusting their reserves are different. Some banks customarily adjust reserves by rediscounting paper at the Reserve Bank; others sell bills in the market or to the Reserve Bank, but there are still enough who operate largely through the call loan market so that any general shortage of reserves affecting many banks (and shortages travel the round of the banks rapidly) will almost surely be reflected in higher call rates, in "firmer" money conditions. Moreover, even when a bank adjusts its reserves by borrowing from the Reserve Bank, its efforts to secure funds to pay off this loan usually place pressure directly or indirectly on the call loan money market.

Thus the reserve position of the New York City banks is a prime factor in determining the day-to-day movement of money rates. It is the balance sheet of requirements and reserves on the desk of the operating official of the New York City bank which is the most significant set of facts with regard to money market changes. If one could set up a balance sheet for the banks in New York City as a whole, which would be simply a summary of the balance sheets on the desks of the executives in the principal banks, one would know from hour to hour and from day to day the principal forces which were moving in the money market.

A Reserve Balance Sheet.—In the Federal Reserve Bank of New York an attempt was made in December, 1924, to

set up just such a balance sheet which might indicate what was going on in the money market. The basis of the balance sheet was the figures illustrated by Diagram 27 for the actual and required reserves of banks. Figures for actual reserves were taken from the books of the Reserve Bank at the opening of business every morning for twenty-three of the largest banks. The banks reported their reserve requirements only once a week, at the end of the week, but more frequent estimates of the changes in these requirements were made from daily reports of deposits of principal banks. Reserve requirements change slowly and therefore an estimate of changes during the week served the purpose.

There were thus available every morning figures showing the estimated required reserves of these twenty-three banks and, compared with them, the average reserves actually maintained for this period. These figures alone revealed with a considerable degree of accuracy whether money was likely to be easy or tight for the next day or two, but more than that was wanted—some account of the changes in the situation from hour to hour and the reasons for the changes.

Therefore, an analysis was made of the factors affecting reserves, and the available data for each of these factors were assembled at hourly intervals. It was found that practically every transaction which increased or diminished the reserves of member banks was traceable in the records of the Reserve Bank. These transactions were summarized in an hourly report substantially in the form of Table 22.

In general there are two major types of changes which result in increasing or diminishing bank reserves, that is, which result in a gain or loss of funds to the money market. The first consists of ordinary commercial or agency operations, including the transfer of funds to and from other centers (either by direct wire transfers or in settlement for check-collection operations), currency withdrawals or deposits, gold imports or exports, and operations in which the Federal Reserve Banks act as agents for the government, or for foreign banks of issue, in putting funds into the market or withdrawing them from the market. Each one of those operations may have the effect

of increasing or diminishing the reserve balances of member banks at the Reserve Bank. The upper part of Table 22 shows the operations in these categories which actually took place on October 30, 1925, the figures being shown in net round amounts.

TABLE 22.—LOSS AND GAIN TO MARKET, OCTOBER 30, 1925

(In millions of dollars)

	Net Loss	Net Gain
Commercial and Agency* Transactions:		
Wire Transfers	28	..
Check settlements	..	10
Currency and coin	11	..
Gold imports	..	9
Foreign accounts	..	1
Total	39	20
Net	19	..
Reserve Bank Credit:		
Bills bought outright	..	7
Bills (sales contract)	..	2
U. S. securities bought outright	..	..
U. S. securities (sales contract)	3	..
Loans	..	11
Total	3	20
Net	..	17
Net gain or loss for day	2	..

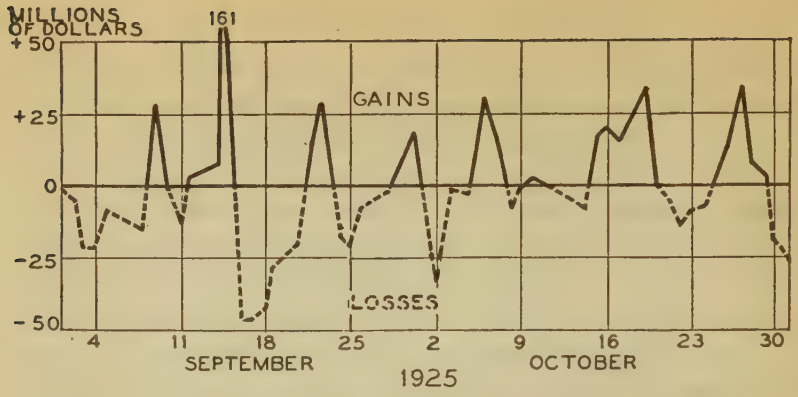
* In Agency transactions are included those transactions in which the Reserve Bank acts as fiscal agent for the Treasury or as agent for a foreign correspondent bank.

The second type of operation affecting the market (bank reserves) is that involving the extension of Reserve Bank credit. When the bank officer in charge of a member bank's position finds that his reserves are deficient, due to such changes as those just listed, he may build up his reserves by

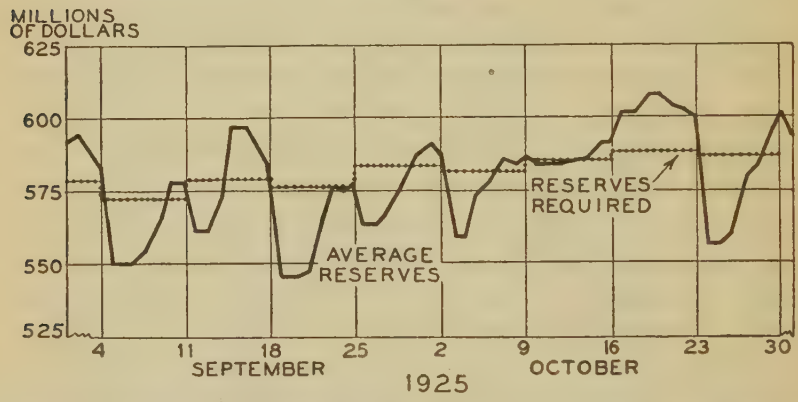
borrowing at the Reserve Bank or selling acceptances to it. Similarly, the government security and bill dealers may in case of need temporarily secure funds to meet their obligations or to enable them to carry an increased portfolio by making temporary sales of securities or acceptances to the Reserve Bank, accompanied by an agreement to repurchase them within fifteen days. The funds thus secured are promptly deposited in a member bank, which in turn redeposits them in the Reserve Bank, increasing its reserves. In these ways the banks may obtain the funds they require to build up deficient reserves.

An experiment with an hourly report like Table 22 over a period of more than ten years, during which reporting methods have gradually been improved, indicates that the net gain or loss which such a report shows at the end of the day corresponds closely with the change finally shown when the reserve accounts of the member banks are totaled the following morning. It will be noted from the table that on October 30 it happened that the amount of Federal Reserve money which was called into use ($17,000,000) and became available to increase bank reserves, was very close to the amount which was lost to the market through other transactions ($19,000,000). It is, of course, largely a matter of chance that this should occur in any single day, but it is exactly what occurs from week to week. Federal Reserve credit is called into use precisely as it is required for the adjustment of the reserve position of member banks.

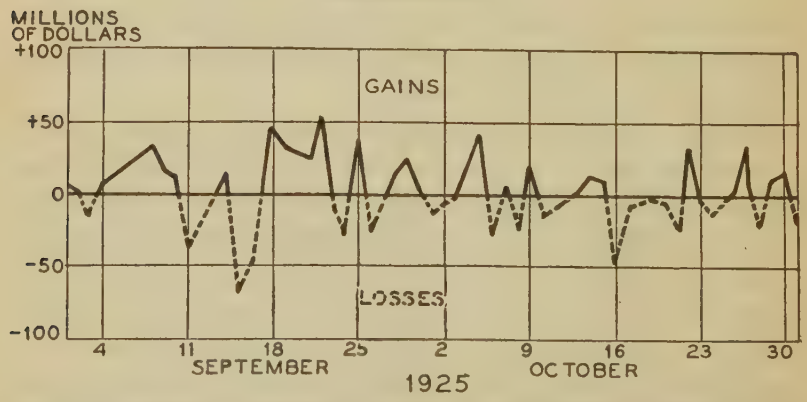
Interplay of Market and Reserve Banks.—Diagram 29 illustrates over a term of two months the reaction on bank reserves of gains and losses to the market from ordinary commercial transactions, and gains and losses through changes in the amount of Reserve credit outstanding. The line of the top section of the diagram is a day-to-day record of gains and losses through commercial and agency operations, such as have been listed in the top half of Table 22. The two lines in the middle section of the diagram are the same as were shown in Diagram 27 and the line in the lower part of the diagram



GAINS AND LOSSES TO RESERVES THROUGH COMMERCIAL AND AGENCY TRANSACTIONS



AVERAGE RESERVES OF 23 NEW YORK CITY BANKS COMPARED WITH RESERVE REQUIREMENTS



GAINS AND LOSSES TO RESERVES THROUGH USE OF FEDERAL RESERVE CREDIT

DIAGRAM 29—DAILY RESERVE POSITION OF 23 NEW YORK CITY BANKS AND GAINS AND LOSSES TO RESERVES THROUGH COMMERCIAL AND AGENCY TRANSACTIONS AND THE USE OF FEDERAL RESERVE CREDIT.

represents gains and losses to the market by increases or decreases in the amount of Reserve credit in use in New York.

If this diagram is followed week by week one sees that changes in bank reserves reflect the aggregate result of the gains and losses to the market shown in the lines at the top and bottom sections of the diagram. For example, in 1925, average reserves started the month of September $15,000,000 above reserve requirements. The market lost funds through commercial transactions (actually through the transfer of funds out of town) and the banks finished the statement week on September 4, with average reserves only about $5,000,000 above requirements. At the beginning of the next week (September 4 to 11) a loss of funds for several days in commercial transactions reduced reserves to a low point, and about the middle of the week the banks borrowed heavily from the Reserve Bank to bring their reserves up to requirements. Newspapers probably talked of "firmer" money.

The following week was the quarterly tax period. The banks began the week with reserves under the requirement. Then occurred the phenomenon familiar to tax-day periods. Government disbursements to redeem maturing issues and pay interest were larger for a few days than receipts from income taxes, checks for which are collected slowly. Thus for a few days the government put funds into the market (shown in the diagram as a heavy gain in commercial and agency transactions); bank reserves were sharply increased and the banks paid off their loans at the Reserve Bank. Money was "easier." For a few days the Treasury obtained funds from the Reserve Bank on a special certificate of indebtedness to cover its excess of payments over receipts.[3] As income-tax checks were collected, bank reserves were drawn down, the banks were forced to borrow once more at the Reserve Bank, and the Treasury paid off its special certificate.

Meantime, there was an interesting movement in the relation with other districts. The amount of Treasury obligations redeemed in the New York district is always large because New York is an investment center. To help meet the

[3] Now prohibited under the Banking Act of 1935.

overdraft at the Reserve Bank caused by the heavy redemptions, the Treasury transferred funds from other districts. But the money pulled out of other districts created a vacuum there and banks in those districts drew upon their balances in New York to maintain their reserves. This withdrawal of funds, shown by the sharp drop in the top line, was another influence supplementary to the collection of income-tax checks in causing a downward movement of reserves.

So the careful reader may find in the record of other weeks shown in Diagram 29 the interaction of commercial and agency transactions, bank reserves, and Federal Reserve credit.

As a result of this study the conclusion may be drawn that the call rate in New York reflects primarily the balance sheet of bank reserves and it is possible to analyze the changes in bank reserves to show the principal causes which had led to the changes. For a knowledge of money conditions it is no longer necessary to depend solely on the "feel of the market."

More broadly, a study of the money market by the methods reviewed in this chapter suggests immediately certain generalizations concerning the operation of the money market under the conditions which have prevailed for most of the life of the Reserve System, preceding the abnormal conditions from about 1933 on.

1. Small movements of funds frequently had large results in creating "easier" or "firmer" money conditions. A gain or loss to the market of 20 or 30 million dollars of reserve money frequently made a difference of ½ per cent in the call money rate. Although large amounts of funds were employed in the money market, the market was delicately balanced and easily affected by small movements in either direction. In fact, the market illustrated the law of marginal differences.
2. The Federal Reserve Banks were in continuous contact with the money market. As the constant ebb and flow of funds between the New York money market and other centers took place, the New York City banks called on their Reserve Bank for constantly changing amounts of accommodation, so that there were daily fluctuations in their use of Reserve Bank facilities. It has been only rarely—as, for example, for a few weeks during the

period of easy money in the summer of 1924 and the years since gold revaluation—that the New York market has been in any sense independent of the Reserve Bank and out of contact with it. As a rule the contact has been continuous.

3. The use of Reserve Bank credit by the money market was in the main a semi-automatic operation. The amount of such credit called into use at any time was the result of the composite action of the officers of many member banks and occasionally of dealers in bills and securities. In the main the use of Reserve credit was on the initiative of these people and not on the initiative of the Bank. The Bank exercised a constant influence largely through its discount and buying rates, but the extent of use of Reserve credit was a direct response to changing needs of the money market.

It should be added that none of these three generalizations has been valid since the middle of 1933. Since then the banks of the country have held large excess reserves and have been independent of the Federal Reserve Banks. Under these conditions small gains or losses of funds have had practically no effect on the money situation. Money rates have gone for weeks and months at a time with no change. The market and Reserve Banks have thus been out of contact. These very facts in themselves are but another evidence of the influential position bank reserves occupy in the money market. Even a moderate excess of reserves over requirements changes the whole behavior of the market.

SUMMARY

1. Almost all transactions in the money market are reflected at one point or another in changes in bank reserves.
2. The daily and hourly balance sheet of required and actual reserves reveals the forces which control money rates. Under normal conditions a small change in the reserve position often leads to a change in rate.
3. Reserve requirements change slowly; but the supply of reserve funds changes rapidly.
4. Changes in the supply of reserves reflect various commercial and Treasury operations, such as transfers to and from other centers, currency deposits and withdrawals, gold

movements, etc.; and reflect also changes in the amount of Federal Reserve credit in use.

5. Federal Reserve funds are called into use in direct response to changes in reserves due to all other causes; Federal Reserve credit is used to adjust reserves to requirements.
6. An analysis of the causes of principal changes in bank reserves continuously recorded in Federal Reserve operations yields an understanding of money conditions independent of the "feel of the market."
7. Huge excess reserves in recent years have changed the whole money market behavior and made the usual rules invalid. This very fact testifies to the key position reserves occupy.

CHAPTER XII

Effect of the Reserve System on Money Rates

THE changes which the Reserve System has made in the money market may be measured to some extent by changes in short-term interest rates. For interest rates are a sensitive index of changing credit conditions. They are perhaps the best available measure of the adaptation of the credit supply to the country's needs.

Interest rates in themselves have, of course, some importance for business. When money can be borrowed at 3 per cent the costs of doing business are less than when rates are 6 per cent. But the difference between these two figures is usually a small item in the business man's total costs. The real question for him (as far as money is concerned) is whether he can get money when he needs it, and whether his banker will give him assurance of future accommodation. When interest rates are high and rising, it is usually a little less easy for the business man to be sure of borrowing money. It is from this point of view that interest rates are chiefly important, as an outward evidence of changes in underlying credit conditions.

A Century of Interest Rates.—Fortunately there are available from various reliable sources records of interest rate changes in this country for more than 100 years. Diagram 30 shows the interest rates on commercial paper in the open market each year since 1831.[1] The cross-bar shows the average for each year, while a line extends from this bar upward to the highest monthly average of the year and downward to

[1] Years prior to 1913 are from an unpublished compilation by Dr. F. R. Macaulay, National Bureau of Economic Research, from the following sources: 1831-1860, E. B. Bigelow, *The Tariff Question*; 1861-1865, J. G. Martin, *Seventy-three Years' History of the Boston Stock Exchange*; 1866-1912, *The Commercial & Financial Chronicle*. Later years are from *The Commercial & Financial Chronicle*.

the lowest monthly average of the year. High interest rates mark the business disturbances of 1836, 1848, 1857, 1873, 1893, 1896, 1907, 1920, and 1929.

When in the future the historian looks back on the history of interest rates in this country, it seems not improbable that he will recognize two outstanding events which have led to greater stability. The first was the establishment of the National Banking System in 1863, the full effects of which were not clearly observable (as Diagram 30 shows) until some years after the close of the Civil War; and the second, the establishment of the Federal Reserve System in 1914.

The stress of the Civil War resulted in the establishment of the National Banking System and the placing of the nation's currency on a sounder basis. After the strain of the war had passed and after resumption of specie payments in 1879, the sounder organization of the credit system was reflected in lower and more stable interest rates. Even the severe financial disturbances of the nineties failed to produce such fluctuations as occurred in the thirties, or the fifties.

But there were still defects in the structure of the country's credit system. Every year there was a characteristic seasonal credit strain, with a corresponding movement of interest rates. In times of emergency there were erratic and violent movements of money rates reflecting recurrent strain. The movement in the panic year 1907 of rates for call money, which fluctuates more violently than commercial paper, is described as follows in a report by the Senate Banking and Currency Committee in November, 1913:

> . . . during the year 1907 the range of interest for money was from 2 to 45 per cent in January, from 3 to 25 per cent in March, from 5 to 125 per cent in October, from 3 to 75 per cent in November, and from 2 to 25 per cent in December, with currency bringing a premium from 1 to 4 per cent during November and December. The blighting effect of these violent fluctuations of the interest rates is demonstrated by the rate charged for 90-day time loans, which during November and December, 1907, were running as high as 12 to 16 per cent, with no business done in time loans of a longer period during the entire month of November and no

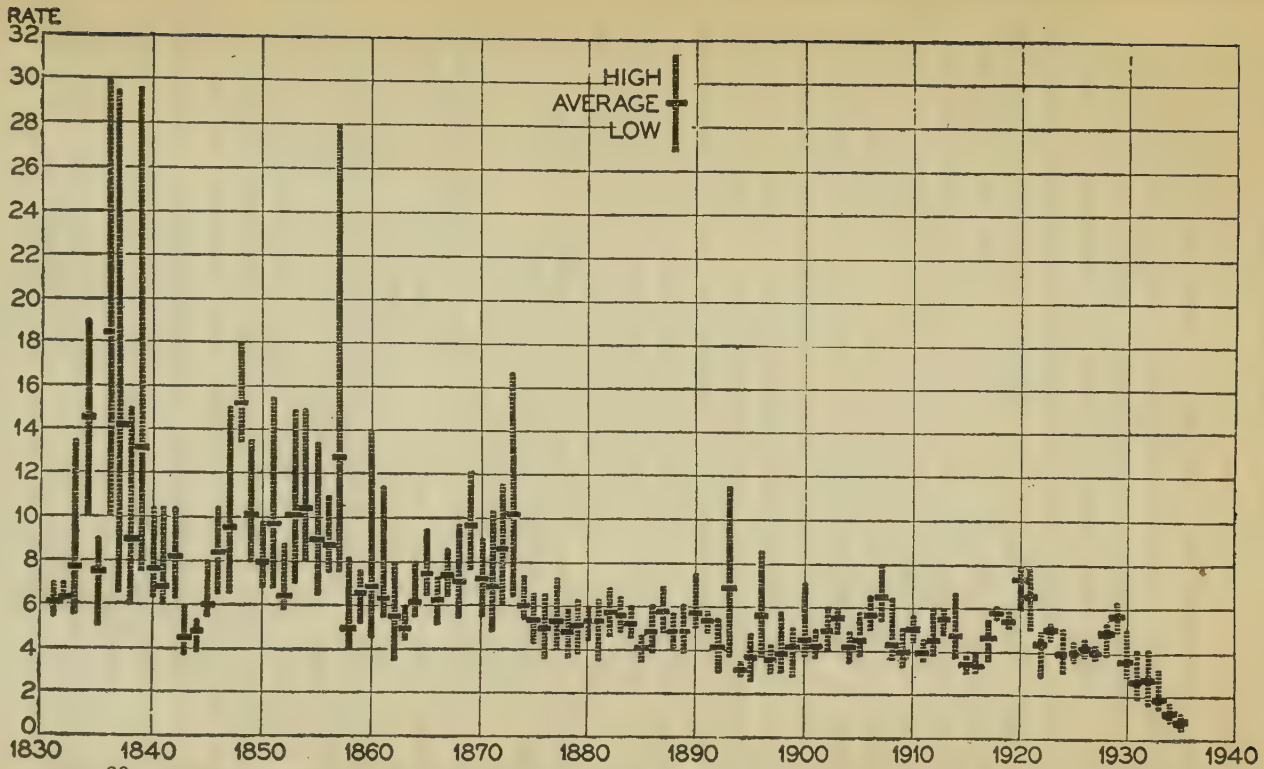


DIAGRAM 30—INTEREST RATES ON COMMERCIAL PAPER IN THE OPEN MARKET. CROSS-BARS SHOW AVERAGE RATES FOR EACH YEAR; TOPS OF LINES SHOW HIGHEST MONTHLY AVERAGE RATES, AND BOTTOMS OF LINES, LOWEST AVERAGE RATES.

business being done at times on prime commercial bills during the same months.[2]

One of the purposes which the Congress had in mind in the establishment of the Federal Reserve System was the eradication of some of these violent movements of interest rates.

Like the National Banking System, the Reserve System was inaugurated during a period of financial strain. It was plunged into the midst of war finance before it had proved itself by any period of ordinary operations. It is rather fruitless to speculate on what would have happened to interest rates during the war if there had been no Federal Reserve System. Some other means would of necessity have been found in the emergency for dealing with war needs for additional credit. It is reasonably sure that these emergency means would not have been as effective as the Reserve System, which provided an organization ready for the emergency; but as far as the facts in the case go, they indicate simply that, while interest rates rose to high figures shortly following the war—and there was considerable credit strain—there was nothing like the same disturbance as had occurred in this country at the time of the Civil War, and in most other countries of the world during and after the World War.

The crisis of 1928-29 and succeeding years provided a further test of the mechanism. Rates for call loans on the Stock Exchange rose as high as 20 per cent, and there were periods of real stringency of money, but all through the period funds were available for the sound business borrower at fairly reasonable rates; open-market commercial paper rates went to 6¼ per cent for only a brief period. The reaction on long term money rates for prime bonds was of moderate proportion.

As this is written it is still too early to measure the full effects of the great depression on money rates. One result is evident: the huge volume of surplus money combined with light demand has resulted in short-term rates below any previous levels, and long-term rates as low as any previous levels. But notwithstanding the unusual conditions during the rela-

[2] U. S. Senate—Banking and Currency Committee: Report to accompany H.R. 7837 (Rep. 133) November 22, 1913; p. 22.

tively short life of the System, some conclusions may be drawn as to the results of its operations.

Reduced Spread Between Maturities.—Since the establishment of the Federal Reserve System in 1914, the spread between rates for longer and shorter maturities of commercial paper has been almost eliminated. Diagram 31 shows for the past forty-six years the rates in the New York open market for four to six months' commercial paper, compared with the rates on 60 to 90-day paper. In the earlier years there was a considerable spread between the two rates, so that it cost the borrower from ½ to 1 or even 2 per cent more to borrow for four to six months than it cost for the shorter period. Since the Reserve System has been in operation, however, the spread between shorter and longer maturities has been steadily reduced, and early in 1924 rates on 60 to 90-day paper were no longer quoted. Little paper of that maturity is now sold, but, if sold, it carries approximately the same rate as the four to six-month paper.

There are a number of explanations for these changes. One is that the Reserve System has provided credit elasticity which makes it easier for banks to adjust their reserve positions. In the old days careful dating of loans and investments was necessary that a bank might be prepared to meet its specified obligations, such as tax or dividend payments, or unexpected calls on its resources, without impairing its reserve. There were no ready means always assured, by which a bank could secure temporary aid to tide it over difficult periods unless it had sufficient maturities or call loans available on every business day of the year to meet possible impairments of reserve. The short-term obligation was, therefore, a desirable employment for bank funds, because it kept funds coming back promptly, ready for the expected or unexpected demand.

The Reserve System has greatly simplified the problem of adjusting reserves. The member bank can now tide itself over an emergency by borrowing from its Reserve Bank. There are also additional facilities for the adjustment of bank reserves in the existence of two new and important markets

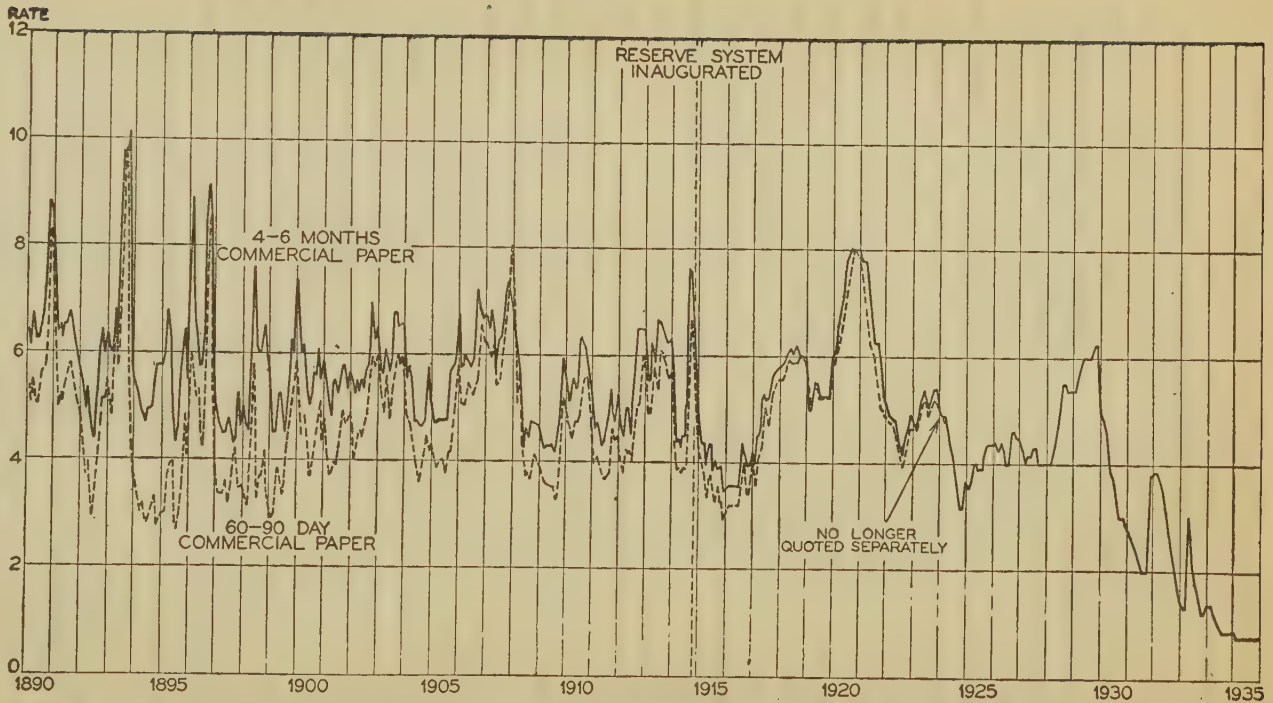


DIAGRAM 31—SINCE THE ESTABLISHMENT OF THE FEDERAL RESERVE SYSTEM THE SPREAD BETWEEN RATES FOR DIFFERENT MATURITIES OF OPEN-MARKET COMMERCIAL PAPER HAS BEEN MUCH REDUCED AND RATES FLUCTUATE LESS.

for the employment of funds for short periods, the bill market and the market for short-term government securities.

The existence of these two markets, in addition to call loans, as avenues for reserve adjustments, together with the possibility of direct borrowing from the Reserve Banks, gives banks greater freedom as to the maturities of their loans and removes some of the difference in desirability between different maturities.

An interesting by-product of this change has been some tendency for rates on stock exchange call money, which represents the shortest possible maturity but is not eligible for rediscount, to be higher relative to commercial-paper rates than they were before the Reserve System was established. There has thus been some tendency for business money to be cheaper and stock exchange money to be dearer.

Reduced Spread Between Cities of West and East.—When the Federal Reserve Act was being discussed in Congress, the hope was expressed that the proposed legislation might result in lessening the disparity between interest rates in different parts of the country. It has been disturbing that the Minnesota farmer should pay 6 to 8 per cent for his money, while money sometimes went begging at 2 per cent or lower in the call-loan market in New York.

This difference in rates is the result of a number of factors, several of which probably will always be operative, no matter what kind of banking system exists. The rural bank explains high rates on the ground that it costs more to make the loan to the farmer because of the high cost of maintaining a local bank, handling many small accounts, determining the farmer's credit, following up the loan, and taking the risk of crop failure. And the money lent to the farmer is often tied up for an indefinite number of months, whereas the call loan can be liquidated at any time. All of these are differences in the character of the two loans which the Reserve System cannot alter.

But another factor in the difference in interest rates between different parts of the country had to do with the fluidity

of the country's credit. In the old days there were more barriers to the free flow of funds throughout the country. Settlements between different parts of the country required eventually the expensive shipment of currency. Under the old check-collection system with its exchange charges, its indirect routing, and complex special arrangements, it took twice as long to make settlements as it does at present. There was usually a premium or discount on New York funds in Chicago or other Western centers; the purchase of New York or other out-of-town funds was like the purchase of foreign exchange. These barriers hindered surplus funds in one part of the country from finding employment in some other part.

The Federal Reserve System has broken down some of these barriers. Check collections have been made faster, safer, and cheaper. Transfers of collected funds are made by telegraph without cost to member banks. Settlements no longer require the shipment of currency, but are made by bookkeeping entries on the reserve accounts of the Federal Reserve Banks. Banks are now less dependent on the New York money market, since adjustment of reserves can be effected at their local Federal Reserve Banks. At the same time access to the New York money market has become easier, and the money markets of Chicago, Boston, and other centers have grown in importance. All of these changes in the mechanism of banking intercommunication tend to reduce the spread between interest rates in different parts of the country.

A number of years ago Bradstreet's began collecting from typical banks in certain centers the rates which they charged their customers on prime commercial loans. *The Annalist* began a similar report in 1911. The Federal Reserve Banks have been collecting such figures in recent years. The New York and Chicago rates, as reported by these agencies, for three years just before the System was established, are compared in Diagram 32 with the figures for 1922, 1923, and 1924, a reasonably typical period. While these figures are subject to some error, partly because the data for the earlier period cannot very well be checked, and partly because it is always

difficult to secure accurate quotations for the rate on loans made in each case by private negotiation, the figures may be relied upon as illustrating the kind of change that has taken place.

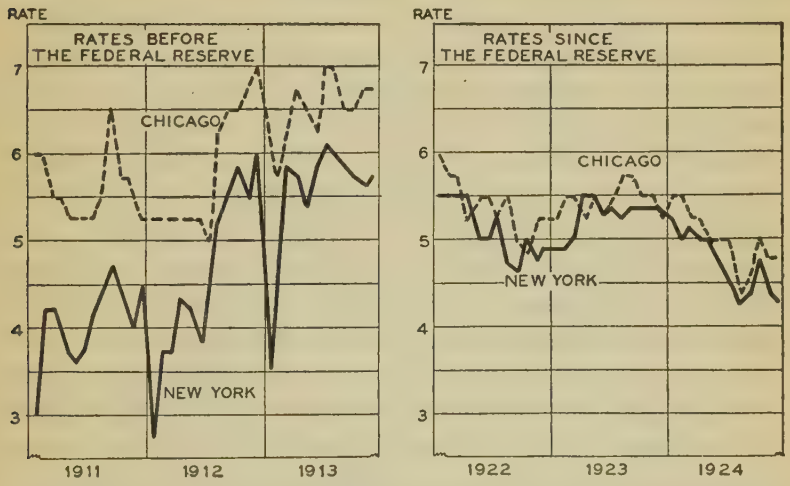


DIAGRAM 32—SINCE THE FEDERAL RESERVE SYSTEM THE DIFFERENCE BETWEEN THE INTEREST RATES CHICAGO BANKS CHARGE THEIR CUSTOMERS AND THE RATES NEW YORK BANKS CHARGE HAS BEEN REDUCED.

Table 23, prepared from the same sources, indicates that, for other centers as well, the spread between rates in the cen-

TABLE 23.—AVERAGE INTEREST RATES ON CUSTOMERS' PRIME COMMERCIAL PAPER, 4–6 MONTHS

	1911–1913	1922–1924
New York	4.74	5.03
Boston	4.86	4.99
Philadelphia	4.97	5.22
St. Louis	5.87	5.27
Chicago	5.98	5.28
Minneapolis	6.15	5.49
New Orleans	7.11	6.10
Kansas City	8.00	5.96

tral money market and in other parts of the country has been narrowed.

Of course, the problem of the Minnesota farmer is far from solved. He pays rates higher than the call rate in New York or the bank customer's rate in Chicago or St. Louis. He will continue to pay high rates until a method has been discovered to administer banking service for the farmer more economically than now and to take out of the farm loan some of the present risk and delay in repayment. But the existence of the Federal Reserve System, together with the accompanying development of the country's monetary mechanisms, has brought the farmer a step nearer to the central money market.

Seasonal Fluctuations.—Another fact of major importance revealed by Diagrams 31 and 32 is that money rates fluctuated from month to month much more rapidly and widely before the Federal Reserve System was established than they do at present. The reader will perhaps have noted that these fluctuations were partly due to a more or less regular seasonal swing of rates. In January and February money tended to be easy. In the early spring rates rose, as the demand for funds increased with the planting of crops and spring trade. Towards summer rates fell, but rose again to the year's high point in the autumn with harvesting and autumn trade. They continued generally high throughout the holiday period with its heavy currency requirements. Changes in rates thus reflected directly changes in business and agricultural activity. Since the establishment of the Reserve System, such seasonal swings of interest rates have been almost though not quite eliminated.

Diagram 33 is an attempt to summarize more clearly the change which has taken place in the seasonal swings of rates. The top section shows the seasonal movement of the volume of business. Retail and wholesale trade do the heaviest part of their business in the autumn. The automobile industry has been most active in the spring. Agriculture calls for large amounts of currency and credit for the spring planting and the autumn harvesting of crops. The line in the diagram,

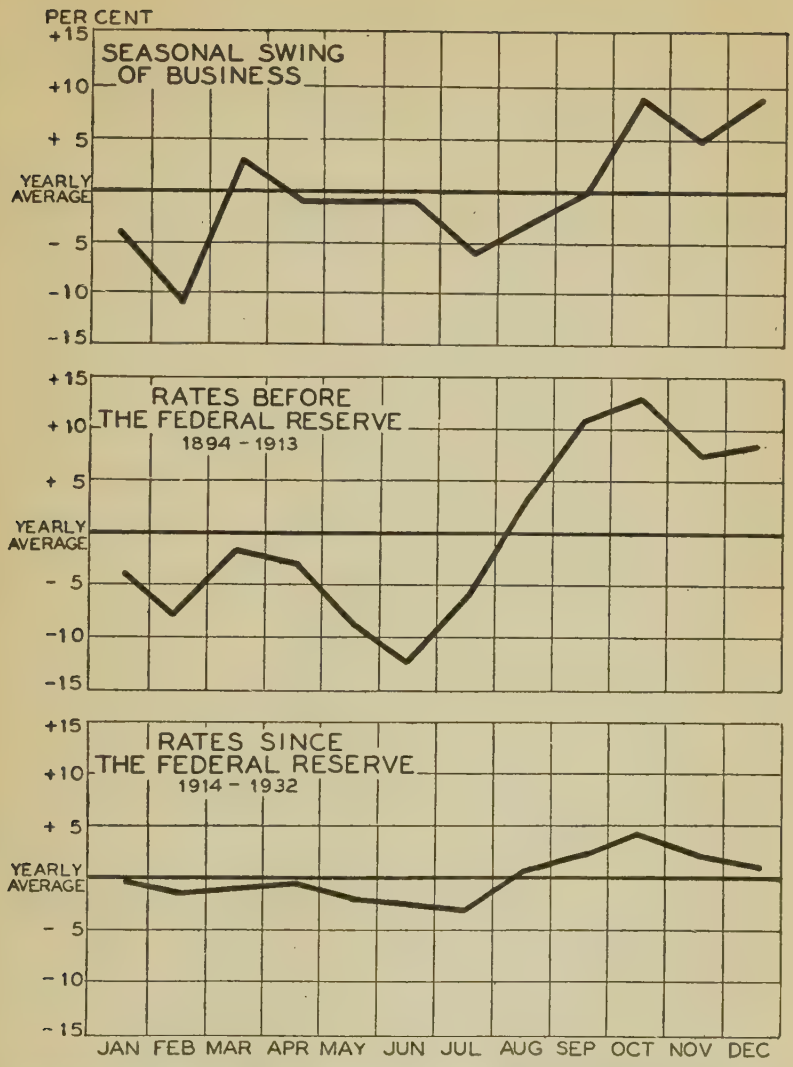


DIAGRAM 33—BEFORE THE RESERVE SYSTEM WAS ESTABLISHED, THE USUAL SEASONAL SWING OF BUSINESS RESULTED IN A SEASONAL SWING IN INTEREST RATES BECAUSE THE COUNTRY'S CREDIT SYSTEM WAS INELASTIC. NOW THE SEASONAL CHANGES IN BUSINESS HAVE LITTLE EFFECT ON INTEREST RATES, BECAUSE CREDIT IS ELASTIC.

which is a composite of many kinds of business, reflects this concentration of activity in spring and autumn.[3]

The middle section of the diagram shows the typical monthly fluctuations of interest rates from 1894 to 1913, and reflects the strain on the banks which resulted from the seasonal swings of business. The lowest section shows the typical monthly fluctuations of rates from 1914 to 1932. Rates now reflect only slightly the additional credit demands of the spring and autumn, but are relatively steady throughout the year. The explanation of the change which has taken place is found largely in the credit elasticity provided by the Reserve System.

While the old seasonal fluctuations of interest rates were important in themselves, because of the way they penalized certain forms of business such as agriculture which usually had to borrow when money was tight, and because of the difficulty in which they placed the banker in the employment of his funds, the fluctuations had their most serious consequences in periods of crisis when the seasonal credit strain was added to a credit strain from other causes. It was not by accident that most of the money panics in this country occurred in the fall of the year; it was in the fall that the usual seasonal strain, added to an unusual credit and currency stringency, became the last straw that broke the camel's back.

Rates in the Business Cycle or in Crises.—Of greater importance for business and banks than the seasonal movement of rates or the spread of rates between maturities or between different parts of the country is the behavior of rates in the business cycle or in business crises. For it is then that shortages or surpluses of credit are most disturbing. Earlier in this chapter it has been pointed out that in both 1920 and the recent crisis rates never reached such extremely high points as in many previous crises. There were no panic rates, and currency and credit were always available for sound business except during the few days when the banks were closed in the spring of 1933.

[3] The line shown is a combined index of the seasonals of the fifty-six series of figures included in the index of the volume of trade of the Federal Reserve Bank of New York described by Carl Snyder in the *Journal of the American Statistical Association*, December, 1923.

But this is about as much as can be said. In a crisis the forces at play are larger than can be met by a monetary mechanism alone. The recent crisis has been disillusioning to those who considered the Reserve System practically a cure-all for financial ills. The events of early 1933 were near enough to the old-fashioned financial panic to throw doubt on more extreme claims as to the power of the Federal Reserve System. As will be noted later, it was demonstrated that a modern bank of issue mechanism is not a substitute for a sound commercial banking system, a sound national economic policy, and sound international financial relations. As the years go on the evidence is accumulating to show what results may reasonably be expected from the operations of a bank of issue and what are beyond its scope.

SUMMARY

1. A hundred-year record of interest rates reflects two major influences towards greater rate stability: the establishment of the National Banking System in 1863 and the Federal Reserve System in 1914.
2. The spread between interest rates for different maturities of commercial paper has been reduced since the Reserve System was established, and rates for stock exchange loans have been higher relative to those for business loans.
3. The spread between interest rates in different sections of the country has been reduced since the Reserve System was established.
4. Seasonal fluctuations in interest rates have been almost but not quite eliminated through the presence of the Federal Reserve mechanism.
5. In the business crises since the Reserve System was established, panic rates have been avoided and money has been available for sound business borrowers, but it has been demonstrated that the Reserve System is not a panacea for all economic ills.

CHAPTER XIII

Organization for Policy Decisions

PRECEDING chapters have described in some detail the mechanism by which reserve funds flow from the Reserve Banks into the money market when needed, and flow back into the Reserve Banks when the need has passed, but little has been said thus far about the general policies governing this flow. Emphasis has, rather, been laid upon the semi-automatic phases of the movement.

But the Reserve System has an important responsibility in connection with this movement of funds. The problem is to set up the mechanism in such fashion that reserve funds will be used as fully as necessary to provide business with adequate credit, without at the same time encouraging their too free use. To put it another way, the problem is to aid in the adjustment of the volume of credit to the volume of business. Maladjustments in this relationship tend toward inflation, rising prices, and speculation on the one hand, or deflation, falling prices, and depression on the other.

In their power to determine the price of reserve money and the general conditions under which member banks and others may secure it, the Board of Governors of the Federal Reserve System and the directors and officers of the Federal Reserve Banks thus carry a heavy responsibility; for their influence in making reserve funds easy or difficult to obtain may have large economic and social consequences. The problem in this field with which the public is most familiar is the determination of the discount rate—which is simply the price which member banks must pay for the money they borrow from the Reserve Banks. But there are other similar problems just as perplexing: the problem of open-market policy, the problem of dealing with individual member banks which may be abusing the borrowing privilege, and under recent

law the problem of fixing reserve requirements for member banks and margin requirements on security loans. All these are phases of the general problem of credit policy.

Before considering in detail any of these policy questions it will be well to say something as to the general mechanism of the Reserve System for deciding policies, and particularly as to who make the decisions.

It may be noted first that it is a relatively new thing in this country to have any agency considering, and able to exercise an influence upon, the country's general credit policy. In the old days, with the country's bank reserves scattered among many thousands of separate banks, each working for its own interest and each organized for profits, no continuous common policy was feasible. No one was responsible for general credit conditions. In times of emergency when some joint action was imperative, powerful private individuals and the clearing houses took command of the situation and enforced some plan for a short period. In many other countries banks of issue exercised continuous leadership, but here, save for the two periods more than a century ago when the first and second banks of the United States were in operation, we had no such agency, until the Reserve System was established. The Reserve Act provided an organization, not operated for profit, continuously concerned with the country's monetary and banking policies.

Local and National Interests.—The mechanism for determining Federal Reserve policy is designed to safeguard local interests, while at the same time to insure national unity in policy.

The objective of the Federal Reserve Act on this point was stated on October 17, 1914, by President Wilson in a letter to Senator Underwood of Alabama, as follows:

> No group of bankers anywhere can get control. . . . No one part of the country can concentrate the advantages and conveniences of the system upon itself for its own selfish advantages. . . . I think we are justified in speaking of this as a democracy of credit. Credit is at the disposal of every man who can show energy and assets. Each region of the country is set to study its own needs

and opportunities and the whole country stands by to assist. It is self-government as well as democracy.

Beginning with the local member bank the principle of local self-government is respected. The Federal Reserve Banks do not tell their member banks what loans they may or may not make to their customers, what investments they may buy, or what deposits they may accept. All these are matters for decision by the member bank, under the general restrictions of national or state banking law, and subject to examination and general supervision to aid in the maintenance of sound credit practices.

Similarly, the twelve Federal Reserve Banks are in most of their operations autonomous units. Each Federal Reserve Bank is operated by its own directors and the officers whom they appoint. Each Reserve Bank decides within the law how much or how little it will lend to member banks. Each Reserve Bank is responsible for initiating changes in its discount rate. It is clear in the Federal Reserve Act even as amended by the Banking Act of 1935 that Congress had the intention, not of creating one central bank in this country, but rather a regional banking organization, with centralization only in those matters in which coordination of practice and policy is essential to the national welfare.

There are certain of the semi-mechanical functions of the Reserve Banks which are country-wide in scope, and in which uniformity of practice is obviously necessary, such as the collection and wire-transfer systems; and for these functions the Washington Board prepares uniform regulations. In matters of general credit policy, moreover, coordination is essential. The law, therefore, provides that discount rates established by the individual Reserve Banks are subject to "review and determination of the Board of Governors of the Federal Reserve System." Coordination in policy with respect to open-market purchases of acceptances and government securities is effected through a Federal Open Market Committee composed of all the members of the Board of Governors and five representatives of the Federal Reserve Banks elected by directors of the Reserve Banks by regions.

Changes in reserve requirements of member banks above the present amounts and up to twice the requirements at the time the Banking Act of 1935 was passed, may be made by the Board of Governors. They may also fix margin requirements for loans on registered equity securities.

As the present edition of this book is being prepared the Banking Act of 1935 is just going into effect. During the discussions of that Act one of the major questions was the locus of power in the Reserve System, the extent to which power of determining credit policy should be centralized or localized. This Act, and to a lesser degree its predecessor the Banking Act of 1933, increased the powers and responsibility of the Board of Governors and the Open Market Committee and decreased the powers of the regional banks.

Who Decides Policy?—The formal balance of power between regional and central authorities of the Reserve System is important, apart from the question of technical effectiveness of organization, for its influence on the quality of personnel which may be enlisted in the service of the System. The two essential requirements for the personnel of a bank of issue are that it should be able and independent. It is valuable to survey the Federal Reserve organization from the point of view of its capacity to provide a personnel which meets these qualifications, bearing in mind that the greatest dangers to independence lie in the risk of political interference on the one hand and of commercial banking pressure on the other, and upon these two points the subtle alchemy of location is perhaps even more important than any direct pressure which may be exerted.

The important groups of people who decide and administer Federal Reserve policy are the Board of Governors of the Reserve System in Washington with their staff, the boards of directors of the individual Reserve Banks, and the officers of these Banks.

The Board of Governors under the Banking Act of 1935 consists of seven full-time members appointed by the President, by and with the consent of the Senate, for fourteen-year terms, and ineligible for reappointment, with salaries of

$15,000 per annum. Of these seven, one is designated by the President as chairman for a four-year term and another as vice-chairman for a like term. Not more than one of the seven members shall come from any one Federal Reserve District. They must be appointed with "due regard to a fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country." They are forbidden to accept appointment to a position with any member bank for two years after leaving the Board of Governors unless they shall have completed a full term of office. Until the Banking Act of 1935 became effective, the Secretary of the Treasury and the Comptroller of the Currency were members of the Board, ex officio; but under this Act they are no longer members. The new Act has lengthened the terms of governors of the System from twelve to fourteen years, increased their salaries from $12,000 to $15,000, and made them ineligible for reappointment after serving a full term.

The provisions of the new Act with respect to the Board appear to offer a greater assurance of independence from whatever administration happens to be in power, though it should be stated that the members of the Board have always occupied an exceptionally independent position, and its staff has enjoyed immunity from political pressure for jobs. The major problem with respect to the Board has been to secure men of the unusual abilities required, who are willing and able to make the sacrifice involved in accepting long appointments at relatively modest salaries in positions which are cut off from participation in banking and business enterprise. An early draft of the Banking Act of 1935 attempted to make Board membership more attractive by providing salaries equal to those of Supreme Court justices and suitable pensions on retirement after completion of a full term, but these provisions were not retained.

While all legal responsibilities rest on the members of the Board themselves, the gradual development around them of a permanent and competent staff has become an important

influence towards the effective administration of the Reserve System.

Each Federal Reserve Bank is governed by a board of nine directors, six of whom are elected by the member banks and three appointed by the Board of Governors in Washington for three-year terms. Of the six elected by member banks three are bankers representing the member banks of the district, and the other three must be actively engaged in commerce, agriculture, or industry and, while serving the Reserve Banks, may not act as directors or officers or employees of any other bank. Of the three directors appointed by the Board of Governors one is designated by the Board as chairman. He must be a man of tested banking experience, and serves as Federal Reserve Agent as well as chairman; in the past it has been a full-time position, but may in the future be held by a man with another occupation. A second of the Board appointees is deputy chairman. The Board appointees must have no other banking connection while serving as directors. Except for the chairman, directors have received no compensation other than fees for attending meetings. Out-of-town directors are reimbursed actual expenses.

Under these terms of the law five of the nine directors of each Reserve Bank are ordinarily business men, three are active bankers (frequently with business interests also) and one is the chairman. From time to time a survey of the occupations of the directors has been made, and such a survey at a typical period in 1926 showed that of the 108 directors of the twelve Reserve Banks twelve were the chairmen of the board, 36 were active bankers, and the remaining 60 had the following occupations:

19 manufacturers
14 merchants
4 farmers
4 lumbermen
2 insurance men
3 investment bankers
3 retired business men
2 publishers
2 lawyers
2 railroad men
1 cattleman
1 contractor
1 public utilities man
1 mining official
1 savings bank officer

In each district election or appointment to the board of the Reserve Bank has come to be regarded as an honor which is seldom refused. The boards are composed of men of character and ability.

In addition to the directors of the twelve Reserve Banks each of the 25 branches has a board of not more than seven nor less than three directors residing in the branch territory, a majority of whom are appointed by the Federal Reserve Bank of the district and a minority by the Board of Governors of the Federal Reserve System. The branch directors have a range of occupations and interests similar to those indicated above, though bankers are more largely represented. The branch directors deal with local matters, including the approval of loans, rather than with matters of general credit policy.

Meetings of the directors of the Reserve Banks are held once a week in the New York District, and once every two weeks in most of the other districts. An executive committee meets between the board meetings.

Since the directors of the Reserve Banks, with the single exception of the chairmen, have been men with other occupations who ordinarily spend only a few hours a month on the work of the Banks, the major responsibility for the current operations of the Banks must perforce fall upon permanent officers elected by the directors. The Federal Reserve Act originally provided that each board of directors might appoint "such officers and employees as are not otherwise provided for in this Act." Following the practice of European banks of issue the executive head of each Reserve Bank has in the past been designated as the governor of the bank, though no such office was provided for specifically in the Reserve Act. There have been one or more deputy governors of each bank. The Banking Act of 1935 for the first time recognized in law such a chief executive officer, but fixed his title as president and provided that he and a first vice president should be elected for five-year terms by the directors of each bank, subject to the approval of the Board of Governors of the Federal Reserve System.

Heretofore no approval by the Board of Governors was required except as to salaries.

Official positions in the Reserve Banks have provided an opportunity for the development of a form of public service with considerable permanency of tenure, and freedom from most of the restrictions of government service. While these officials have few statutory powers and their duties are to administer the policy determined by the Board of Governors of the Reserve System and by the directors of the Reserve Banks, they may be recognized as one of the groups influential in policy formation. It has been a practice to hold conferences at frequent intervals of the governors and chairmen of the Reserve Banks for the discussion of policy and operations, and, as will be discussed later, the governors of the Reserve Banks were organized into an open-market committee to make recommendations as to open-market policies.

The Federal Reserve Act also provides for a Federal Advisory Council consisting of one member from each district selected by the board of directors of the Reserve Bank in that district. This council meets at least four times a year in Washington and discusses with the Board of Governors important problems of policy. The council members have been prominent bankers.

These then are the groups of men whose judgment is brought to bear upon problems of Federal Reserve policy:

A Board in Washington, insulated in considerable measure from political influences, and aided by a permanent staff.

Boards of directors of individual Reserve Banks, with business men in the majority, but including a representation of bankers—practical men with a wide range of experience, free from the bias of politics but with important commercial and banking interests.

Officers of the Reserve Banks—a body of full time public servants insulated from direct responsibility to local banking or business interests, but within the range of that sort of influence in much the same way as the Board in Washington may be said to be within the range of political influence.

An advisory council in practice composed of bankers.

There have always been, and probably always will be, differences in point of view between Washington and the re-

gional Reserve Banks resulting basically from differences of location and atmosphere, but some difference in point of view of this sort is probably highly desirable as a means towards reaching decisions which are impartial and unbiased and yet practical and effective. In this country with its wide territory and range of interests, and with its political capital and its financial center in different cities over 200 miles apart, it is probably impossible to create any single policy-forming body which may be totally free from bias of one sort or another without its being so insulated from contacts as to be impractical and ineffective. Disinterestedness and wisdom can probably be most readily assured by bringing to bear upon decisions the judgment of groups with different sorts of bias. This may at times involve some delay and friction in reaching decisions, but the questions at issue are so momentous and far reaching as to make it of the utmost importance to bring to bear on them several different points of view.

Not Operated for Profit.—By the terms of its establishment the Federal Reserve System has a different philosophy from that of commercial banks. The mechanism is devised so as to remove the profit motive as completely as possible from all decisions. The law specifies that the member banks who own the stock of the Reserve Banks shall not receive more than 6 per cent dividends and, as has been shown, the three bankers who are direct representatives of the member banks are a minority on the directorates of the Reserve Banks. Any excess earnings of the Reserve Banks over and beyond their expenses and dividends accumulate as a surplus fund against possible losses, which would revert to the Treasury on the dissolution of the Reserve Banks. Changes made by recent legislation as to the disposition of earnings were reviewed in detail in Chapter II. The essential point is that the limitation upon dividend payments removes the incentive to operate the Reserve Banks for profits and makes public service the sole consideration in their policy.

More positively the Federal Reserve Act lays down the principle that the discount rate shall be determined "with a view of accommodating commerce and business." Similarly it is pro-

vided that with respect to open-market operations "the time, character, and volume of all purchases and sales of paper described in section 14 of this Act as eligible for open-market operations shall be governed with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country."

Furthermore there is no question with the Reserve Banks of getting or retaining customers; they cannot solicit business, and that which they have cannot be taken away by competitors, though banks may withdraw from the Reserve System. There are no special arrangements for particular customers; in fact, the Reserve Act specifically forbids "discrimination in favor of or against any member bank." In each district the largest bank and the smallest bank borrow at the same rate.

The whole atmosphere of Federal Reserve policy-making is thus quite different from that of the commercial institution. It encourages impartial decisions, with the public welfare as the goal.

Research Staffs.—From the earliest years of their operation the Reserve Board and Banks recognized the need of the fullest possible information on business and credit conditions as an aid in determining policy. The Federal Reserve Board organized a Division of Analysis and Research in 1918, and all the Reserve Banks have organized statistical departments. At the present time the reporting and statistical service of the System is one of the most highly developed in the country.

The result is that when a board of directors of a Reserve Bank or when the Board of Governors in Washington considers a question of policy, it has before it a wide range of data as to the condition of business and banking. A number of the diagrams in this book are similar to the large charts which are regularly presented with other information at the weekly meeting of the directors of the Federal Reserve Bank of New York. Of still greater importance are the analyses of policy problems undertaken by the research staffs of the Board and the Banks.

In order that the public may be fully informed as to the fact basis upon which policies are founded, most of the infor-

mation assembled is presented regularly in the Federal Reserve Bulletin and the monthly reviews of credit and business conditions published at the twelve banks.

SUMMARY

1. Previous chapters have dealt largely with the semi-automatic phases of the use of Federal Reserve funds by the member banks and the market, but the Reserve System has at its command means for exercising an important influence on the extent of use of reserve funds. This is the field of Federal Reserve policy.
2. In the operation of the System the principle of local autonomy is observed. It is only in matters where uniformity of practice and policy is essential for the welfare of the entire country that central coordination is provided for.
3. The provisions governing the appointment of the Board of Governors of the Federal Reserve System and the election of the directors of the Reserve Banks give assurance that the people who decide policy will represent all parts of the country and a wide range of business and banking interests and will not be dominated by either political influences or banking pressure.
4. The Federal Reserve mechanism is so designed as to remove the profit-making motive as completely as possible from its policy. Profits are limited and the "accommodation of commerce and business" and the effect on the general credit situation are the considerations by which policy is to be guided.
5. As an aid in policy determination the Reserve Board and Banks maintain qualified research staffs continuously engaged in the collection, and interpretation of economic information, and the analysis of policy problems.

CHAPTER XIV

Tradition and the Discount Rate

AFTER the preliminary observations in the preceding chapter as to the general organization of the Federal Reserve System for policy decisions, it is well to examine more specifically some of the kinds of decisions which have to be made, some of the factors taken into consideration in reaching them, and some of the results.

It is the function of the Reserve Banks always to have money to lend at a price, that every legitimate need for credit may be met. To encourage the proper use of its credit and to discourage excessive use of its funds the System has developed under the law and in practice a number of forms of credit control.

1. Tradition against borrowing.
2. Discount rate.
3. Open-market operations.
4. Direct dealing with individual banks.
5. Publicity.

To these five general forms of credit control there must be added since the passage of recent legislation the power to alter reserve requirements, and the power to fix margin requirements on loans to carry securities.

These instruments will be discussed in order.

Tradition Against Borrowing.—It may seem strange to speak of tradition as having an important influence upon the operations of an institution only twenty-one years old. The word is justified because there appears to have been transferred to the Reserve System an inheritance from the past.

Just as in the old days the bank which borrowed largely and continuously from its correspondents was looked upon with suspicion, so today there exists generally a feeling against large and continuous borrowing from a Federal Reserve Bank.

This is a feeling which the officers of the Reserve System have at times encouraged. Federal Reserve funds are the country's banking reserves and should be used in busy seasons and emergencies, and not as a substitute for bank capital.

The facts as to the unwillingness of banks to remain heavily in debt at the Reserve Banks for long periods are illustrated

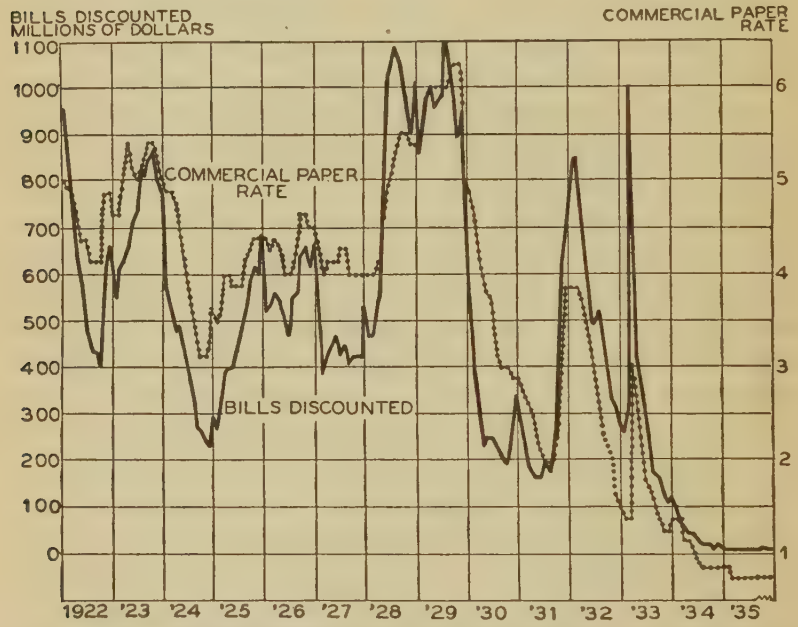


DIAGRAM 34—OPEN-MARKET INTEREST RATE FOR PRIME 4–6 MONTHS' COMMERCIAL PAPER AND MONTHLY AVERAGES OF DAILY BILLS DISCOUNTED FOR MEMBER BANKS BY ALL FEDERAL RESERVE BANKS.

by Diagram 34, in which one line shows the amount of borrowing at Reserve Banks, or total bills discounted, by all member banks; and the other shows the interest rate on prime 4 to 6 months' commercial paper in the open market. The remarkable correspondence between these two lines is apparently due to this tradition against borrowing. When the member banks find themselves continuously in debt at the Reserve Banks, they take steps to pay off that indebtedness. They tend to sell securities, call loans, and restrict their purchases of commercial paper and other investments. The con-

sequence is that when a large number of member banks are in debt, money generally becomes firmer, commercial paper sells less rapidly, and rates increase. Conversely, when most of the member banks are out of debt at the Reserve Banks they are in a position to invest their funds; and money rates, including commercial-paper rates, become easier. This relationship rests largely on the unwillingness of banks to remain in debt at the Reserve Banks.

If the discount rates of the Reserve Banks were high the unwillingness of member banks to stay in debt could easily be accounted for on that ground alone. But the Reserve Banks have seldom charged rates higher than those the banks have charged their customers, and tradition is probably more important than the rate in preventing continuous borrowing.

The Discount Rate.—To the general public the discount rate has become the symbol of Federal Reserve policy. Because changes in the discount rate have been so widely commented upon in the press and in economic literature, they have assumed an importance greater than their purely economic significance as changes in the price which member banks pay for accommodation at a Reserve Bank.

The importance of a change in discount rate lies principally in the fact that it is a public recognition by a group of responsible and well-informed people of a change in the credit situation. For example, a change in the discount rate from 4 to 3½ per cent is equivalent to an announcement that credit conditions are easier. Discount rates do not change frequently. In the past five years the Federal Reserve Bank of New York has changed its discount rate ten times, or twice a year on the average. Thus an announcement of change is sufficiently rare to be dramatic.

The discount rate of each Reserve Bank is established by the directors of the bank subject to "review and determination" by the Board of Governors of the Reserve System. A discussion of the discount rate is on the agenda for every meeting of Reserve Bank directors. The discussion is facilitated by the presence of memoranda, reports, and charts. When once the directors have agreed upon a change, the decision is tele-

phoned or telegraphed to the Board of Governors in Washington. The Board considers the matter as promptly as possible and in fact usually gives its approval or disapproval the same day. Immediate action is possible because there has usually been preliminary informal discussion of any prospective change. A change in rate is usually announced at the close of business that same day. No reasons for the action are ordinarily given out at the time, partly because the decision represents the views of many people, who have perhaps acted for somewhat diverse reasons, so that it would be an extremely difficult task to phrase a statement which would fairly represent the views of all the directors of the Reserve Bank concerned and the Washington Board; and partly because it would be equally difficult to make any statement which did not either exaggerate or minimize the importance of the change. Such a statement is always subject to misinterpretation, as has been repeatedly illustrated.

Instead of making statements explaining specific rate changes, the Reserve System has followed the practice of making public in its reports, as fully as possible, the data which the Federal Reserve directors and Board have before them when they make their decisions. There have frequently also been informal conversations with the representatives of the press reviewing the general factors having weight in discount rate discussions. The annual reports of the Reserve Banks and the Board have usually contained, some months after the event, the circumstances of the rate changes. Under the Banking Act of 1935 this record in the future must be even more complete, for that Act says:

> Sec. 10; par. 10. The Board of Governors of the Federal Reserve System shall keep a complete record of the action taken by the Board and by the Federal Open Market Committee upon all questions of policy relating to open-market operations and shall record therein the votes taken in connection with the determination of open-market policies and the reasons underlying the action of the Board and the Committee in each instance. The Board shall keep a similar record with respect to all questions of policy determined by the Board, and shall include in its annual report to the Congress a full account of the action so taken during the preceding year

with respect to open-market policies and operations and with respect to the policies determined by it and shall include in such report a copy of the records required to be kept under the provisions of this paragraph.

A further word should be said about the relationships between the Board of Governors of the Federal Reserve System and the several Federal Reserve Banks in discount rate decisions.

The original Federal Reserve Act read, "Every Federal reserve bank shall have power . . . to establish from time to time, subject to review and determination of the Federal Reserve Board, rates of discount to be charged by the Federal reserve bank for each class of paper, which shall be fixed with a view of accommodating commerce and business."

There was never complete agreement between the Federal Reserve Board and the Reserve Banks as to whether this provision gave the Board power only to approve or disapprove a rate voted by a Reserve Bank or whether the Board under the power of "determination" might order a rate change different from that voted by a Reserve Bank or at a time when a Reserve Bank had taken no action. There have been two instances of action of these sorts. In January, 1920, the Board failed to approve an increase in the rate at the New York bank on advances on government securities and ordered an increase of the rate on commercial discounts. Since the principal borrowing was being done on government securities, the Board's action was against vigorous discount rate control. Again in August, 1927, the Board ordered a decrease in the rate of the Chicago bank without action by its directors.

The Banking Act of 1935 added to the provision of the Federal Reserve Act quoted above the following phrase, "but each such bank shall establish such rates every fourteen days, or oftener if deemed necessary by the Board." This addition clarifies the section at least to the extent of assuring to the Board the opportunity of frequent review of discount rates established by the banks. Whatever may be the Board's precise power with respect to discount rates, it appears still to be

the intent of the law that rate action should represent a coordinated policy of the Board and the Reserve Banks.

Reasons for Rate Changes.—In making decisions as to discount rates the Reserve System has found precedent of limited value. This is partly because there has been in this country since 1920 an extraordinary situation as to gold reserves. In the history of European banks of issue, gold reserves have seldom been so large that their fluctuations could be ignored. Of necessity the usual practice was for banks of issue to raise their rates when necessary to protect their gold reserves, and reduce them when this protection was no longer required.

The Reserve Banks have held such large gold reserves that there was no time from 1921 to the 1931-33 crisis when action for their protection was necessary. On the contrary, the incoming gold caused embarrassment. Instead of considering means of attracting gold, it was necessary to consider means of repelling it to escape its inflationary influence. This complex question will be discussed later.

The mechanical means of measurement by which banks of issue have in the past watched their gold positions has been the reserve ratio. Such a ratio is published as a part of the weekly statement of the Federal Reserve System; it is the ratio of total reserves to liabilities of the Reserve Banks for Federal Reserve notes they have issued and their deposits. During the war years this ratio was something of a guide to credit policy, just as the reserve ratio of the Bank of England has always been a guide to the directors of that institution. Historically, banks of issue the world over have watched their reserve ratios and, other things being equal, have raised their discount rates when the reserve ratio went down, and lowered discount rates when it went up. In 1919 and 1920 the Reserve System had to watch its reserve ratio carefully, for at times it came close to the minimum, and made rate increases necessary.

Then as gold poured into the country in 1921 and 1922 the reserve ratio rose by leaps and bounds and lost its significance as a guide to credit policy. Since then discount rates have been increased or decreased independently of the movement of the

reserve ratio, except for one or two occasions during the banking crisis. Thus one time-honored mechanical aid to rate policy has been largely in abeyance.

Another frequently quoted rule of thumb from British experience which has not been followed literally in this country is the rule that the discount rate should be "above the market." The Bank of England has always maintained its discount rate above the open-market rate on bankers' acceptances, the paper which the bank discounts and to which the discount rate applies. In this country there has been a school of thought which felt that this rule should be taken over bodily, despite a very different banking organization. The rule is interpreted to mean that on commercial paper, the general type of paper to which the discount rate was thought of as applying, the discount rate of a Federal Reserve Bank should be above the open-market rate or bank rate to a customer. The principle back of this rule was that banks should not be able to make money by borrowing at a Reserve Bank, but should, on the contrary, suffer a loss; that the rate should be a penalty rate.

The application of this formula to the United States needs close scrutiny. For in the first place it should be noted that the structure of the London and New York markets is different, and the term "discount rate" means totally different things in the two markets. The outstanding difference for the purpose of this discussion is that the British banks make advances to their customers largely in the form of overdrafts and do not require the promissory notes which are in general use in this country. The British bank does not borrow directly from the Bank of England, but adjusts its position through its holdings of bankers' bills and Treasury bills and its loans to bill brokers. These bill brokers, when necessary, sell bills to the Bank of England at the discount rate or borrow from the Bank on bills. The rates at which the British banks lend to their customers are usually somewhat above the Bank of England rate. The discount rate in the United States applies to the promissory notes which member banks present with their indorsement to the Reserve Banks or to the member banks' own notes

secured by their customers' notes or by government obligations.

It is interesting to observe that in the whole scale of money rates in New York and London the discount rate here has occupied a position not greatly different from that of the Bank of England. At a time when the discount rates in both centers were the same, in May, 1924, for example, the different rates typical in the two markets were as follows:

TABLE 24.—MONEY RATES AT LONDON AND NEW YORK

	London	New York
Bank loans direct to customers	5*	4¾–5¼
Ninety-day time money on stock exchange		3¾–4
Open-market commercial paper		4¼
Discount rate of bank of issue	4	4
Three months' bankers' bills	3	3¼
Short Treasury obligations	2⅝	3

* Approximate.

The relationships over a period of years between the discount rate of the Federal Reserve Bank of New York and the open-market rates for commercial paper and bills are shown in Diagram 35. Except for the past few years of abnormally easy money conditions, the discount rate has moved within a ribbon whose borders are the commercial paper rate and the bill rate.

Some logical basis for the relations shown in Diagram 35 is perhaps found by a closer analysis of the economics involved. It should be noted that the commercial paper a member bank brings to a Reserve Bank for rediscount is different from open-market commercial paper or from the notes a bank receives from its customers. The difference consists in a bank indorsement. The member bank puts its own name on commercial paper, and assumes the risk of non-payment when it brings the paper to a Reserve Bank. If a member bank lends its commercial customer on his note at 5 per cent, the value of

this note with a bank indorsement may be represented by a rate not far from 3½ to 4 per cent. If at that time the Federal Reserve Bank rate is 4 per cent, it is really equal to or above the rate which represents the paper's true value.

From this point of view the discount rates of the Reserve Banks have not been below the market value of the paper discounted; and a bank which figures its costs carefully has not

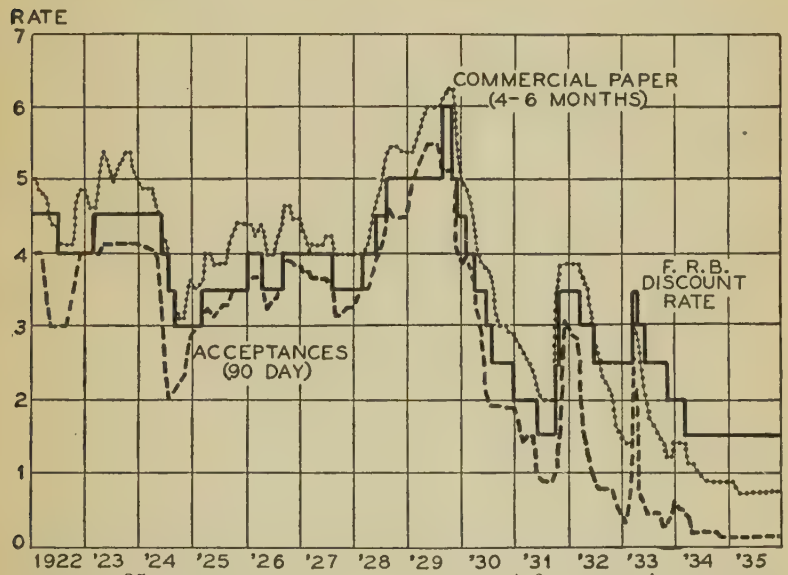


DIAGRAM 35—MONEY RATES IN NEW YORK: 4–6 MONTHS' COMMERCIAL PAPER, 90-DAY ACCEPTANCES, AND THE DISCOUNT RATE OF FEDERAL RESERVE BANK OF NEW YORK.

felt it was making a profit by borrowing. On the other hand it must be acknowledged that many banks do not figure so carefully; and so banks have from time to time borrowed for a profit, especially, perhaps, country banks which do business at rates considerably higher than the money market rates given above. It is a fair question whether a slightly higher discount rate—more in the nature of a penalty rate—might not have been better. Access to the Reserve Banks may have been a little too easy. Control has depended upon the effects of tradition and moderate rates upon a large volume of borrowing. As to the future with the present and prospective large

surplus reserves and hence light borrowing from the Reserve System, higher rates—relative to market rates—may at times be desirable. It remains to be seen whether a different rate relationship can in fact be established. The problem is not solely one of adjustment of the discount rate to other rates, for other rates tend to adjust themselves to the discount rate. In London the banks have followed the general practice of charging prime borrowers a rate about one per cent over the Bank of England discount rate. In this country, while there is no fixed practice, banks would probably try, especially if they were borrowing, to keep their lending rates above the Federal Reserve rates. For this reason the rate relations in Diagram 35 are likely to show considerable persistence. Yet the experience since the war suggests the need for continued study of these rate relations as an element in discount rate decisions.

While the movement of money rates offers the Reserve Bank directors and the Board of Governors in Washington one of their most useful current guides in determining discount rates, there are many other factors which have to be considered. Judgment as to whether the aim should be to maintain the discount rate high or low relative to other money rates, and hence whether reserve money should be relatively easy or difficult to obtain, depends on other factors, all of them indicators as to whether business is getting the credit it needs, or too little, or too much.

The range of information which Federal Reserve authorities have before them when they discuss the discount rate or other policy decisions was suggested towards the close of the previous chapter. The directors of the Reserve Banks bring to the matter their first hand acquaintance with banking and business conditions in their respective districts. The staff of the bank presents to the directors not only a fund of pertinent data, but also a careful analysis of the problem itself. The Board, situated in Washington, is in a position to observe broad national movements and needs.

How much weight should be attached to various aspects of a complex situation, and whether most attention should be paid to prices, to production, to the volume of credit, to gold

movements, to changes in consumer buying, or to other factors, are puzzling questions about which many books have been written. Since these questions relate not alone to the discount rate but to the use of other instruments of credit policy as well, they will be discussed in a separate later chapter on "Guides to Credit Policy."

The difficulty in making decisions arises first from the fact that each decision is a new one. In the kaleidoscope of economic change circumstances are never repeated in exactly the same form. Then again the various semi-mechanical aids to policy decisions such as the movement of interest rates, prices, volume of credit, volume of trade, gold movements, etc., have a perverse way of seldom all pointing in the same direction. In the last analysis, the question of a prospective rate change becomes one of judgment as to whether slightly easier or slightly firmer money will have a beneficial influence on the whole business and credit situation. This judgment, moreover, must project itself into the future and consider the long time as well as the immediate effect of prospective changes.

In its results a change in the discount rate, and in fact Federal Reserve policy generally, is more like a shotgun than a rifle. Policy can never be designed to deal with only one phase of a credit situation; its influence is upon the total volume of credit and its various uses. For example, in the autumn of 1925 commodity prices were declining but stock prices were booming upward and the stock market was using constantly increasing amounts of bank credit. Business also was very active. A rate policy designed to make money easier in view of declines in prices would have encouraged speculation. The conditions early in 1928 were somewhat similar. Discussion of rate policy which centers its attention on only one feature of the situation is misleading and often dangerous. Rate changes affect not one aspect alone but the whole volume of bank credit.

Effects of Rate Changes.—One of the laws of scientific measurement is that if a phenomenon is to be measured it must be isolated; another law is that valid conclusions can only be drawn from many cases. It is difficult to measure the

effects of rate changes because discount rate action can never be isolated; it occurs simultaneously with many other causes. The same considerations which lead the Reserve Banks to raise their discount rates lead business men to exercise caution, and business prophets to issue warnings. Moreover, there must be available many more cases of rate changes before final conclusions can be drawn as to their influence.

Pending further evidence certain tentative and limited conclusions appear reasonable. First, discount rate changes ordinarily have an immediate influence on short-term money rates. A study of Diagram 35 indicates that while discount rate changes have usually followed movements in open market rates, they have in turn been followed by further changes of perhaps ¼ of 1 per cent in rates for commercial paper and bankers' acceptances. The extent to which discount rate changes have influenced other money rates has depended somewhat on the relative position of rates before the change.

There does not usually appear to be any close and obvious connection between the rate and the total amount of member bank borrowing from the Reserve Banks. A decrease in rate does not immediately check a decline in borrowing, nor does an increase in rate by itself usually check a rise in borrowing.

The most powerful influence of a rate change is that which is most difficult to measure—the psychological. On a number of occasions Federal Reserve rate action appears to have played a part in a change in the direction of an economic movement. This was probably true in 1920 and in 1929. In both cases the psychological influence was much more important than the direct. This was because the rate change was a pronouncement by well-informed men concerning the credit situation made at a time when a change in direction of movement was ready to occur or was in process due to other causes.

There have been other occasions when a change in rate appeared to have a direct influence on more strictly monetary movements. In August, 1927, for example, the money market relationships between New York and London were so nicely balanced that a reduction from 4 per cent to 3½ per cent in the discount rate of the New York Reserve Bank, was followed

by a higher price for sterling exchange and a shift in the gold movement from net imports into the United States to net exports.[1]

But such instances in which it may reasonably be said that rate changes have had a definite economic influence are rare, and even in these instances the evidence falls short of convincing proof. Clearly, rate policy cannot now be reduced to a formula. Up to this time it remains an art rather than a science.

SUMMARY

1. There are seven principal forms of credit control in the field of Federal Reserve policy:
   a. Tradition against borrowing.
   b. Discount rate.
   c. Open market operations.
   d. Direct dealing with individual banks.
   e. Publicity.
   f. Changes in reserve requirements.
   g. Change in margins on loans to carry securities.
2. Member banks are generally unwilling to remain in debt to a Reserve Bank for long periods. This tradition against continued borrowing, inherited from pre-Federal Reserve practices, is a powerful restraint.
3. A change in discount rate is important as a public recognition by a group of responsible and well-informed people of a change in the credit situation.
4. In deciding discount policy two European precedents have not been followed: the reserve ratio of the Reserve System has been so high during most of its life that it could be and has been ignored; and the rule of thumb that the discount rate should be "above the market" has not appeared to be directly applicable because of a different money market structure, and different methods of access to the bank of issue.
5. In practice the discount rate has usually been between the

[1] See Burgess, "The Money Market in 1927," *Review of Economic Statistics*, February, 1928.

open market rates for ninety-day bankers' acceptances and 4 to 6 months' commercial paper. A rate so placed has appeared to be a fair price for Federal Reserve funds, though, for the future, the question may well be raised whether such a rate makes borrowing too easy.

6. In its results a change in discount rate is more like a shotgun than a rifle; it affects the total volume of credit. Therefore discount rate decisions cannot properly limit themselves to a single objective but must consider the whole economic situation.
7. Only in rare instances are the full results of rate changes convincingly clear. This is especially true of the psychological results which are often of the greatest importance.
8. Rate policy, therefore, cannot be reduced to a formula and remains as yet an art rather than a science.

CHAPTER XV

Open Market Operations

THE term "open market operations" is used in two different senses. In a broad sense it signifies all those transactions in which the Reserve Banks employ their funds besides their loans. In this sense open market operations include the purchase and sale of bankers' acceptances, of government securities, and other limited types of transactions. In a narrower sense the term signifies the purchase and sale of government securities.

This chapter on Federal Reserve credit policy is primarily concerned with the narrower field of open market operations, the purchase and sale of United States Government obligations, because it is mainly in these transactions that policy finds positive expression. But before focusing upon this one type it may be well to pause a moment to remind ourselves of the scope of the open market operations of the System in their broader aspects.

Broad Powers in Open Market.—The Federal Reserve Act gives the Reserve Banks broad powers to deal in the open market, under direction of and regulations adopted by the Federal Open Market Committee, and in certain instances regulations of the Board of Governors. These powers are mostly defined in Section 14 of the Act. Aside from the power to deal in gold under provisional regulations issued under the Gold Reserve Act of 1934, as amended, the powers include the right to buy or sell the following:

Cable transfers, bankers' acceptances, and bills of exchange arising out of commercial transactions and of specified maturities, and acceptances of Federal Intermediate Credit banks.

Any direct obligations of the United States, and obligations of the Federal Farm Mortgage Corporation and the Home Owners' Loan Corporation, and other obligations which are fully guaranteed as

to principal and interest by the United States, regardless of maturity.

Any of the following having a maturity not over six months from date of purchase: Farm Loan bonds, debentures of Federal Intermediate Credit banks, and bills, notes, revenue bonds, and warrants of states, cities, or other political subdivisions in the United States issued in anticipation of the collection of taxes or the receipt of assured revenue.

While the list of obligations which the Reserve Banks can buy is a fairly long one, and while some purchases have been made of practically every one of the items listed, open market purchases are in practice confined principally to bankers' acceptances and United States Government obligations. Other purchases have been small and infrequent.

Policy in Buying Bills.—The general plan under which the Reserve Banks buy bankers' acceptances, or bills, has been discussed at some length in previous chapters. Generally they stand ready to purchase bills which are offered to them, at rates which are fixed from time to time in accordance with market conditions. These rates are usually slightly above the rates at which endorsed bills sell in the open market. The purchase of bills is in one important respect similar to discounting paper for member banks, in that the usual control the Reserve Banks exercise over the volume of purchases is a rate control, a control of the price. But the fixing of the rate for buying bills is less a matter of policy than the fixing of the discount rate for loans. The buying rate for bills ordinarily follows closely changes in the open market rates for bills.

Dealings in Government Securities.—It is in transactions in United States Government securities that Federal Reserve policy finds more direct expression; for purchases and sales of these securities have usually been made on the initiative of the Reserve System itself.

There are, it is true, certain transactions, even in government securities, in which the System is in some measure passive except for rate control. These transactions have already been referred to in Chapter VII; they are the purchase of government securities under "sales contract"—or "repurchase agreement." As an aid in maintaining a market for short-term

government obligations, the Reserve Banks stand ready at times when the market needs help to buy these obligations from dealers under an agreement by which the dealer contracts to repurchase the securities within a period of fifteen days. Operations of this character, however, only occur at intervals and the amounts involved are relatively small, seldom larger than 15 to 20 million dollars. To the extent that they do take place, they result in putting additional amounts of Federal Reserve credit into the market at times when money is in active demand and thus relieving strain, and taking it out when the demand has lessened.

But the transaction in which open market policy finds its most important expression is the outright purchase or sale of government obligations. These purchases or sales of securities are at times more effective in influencing the credit situation than the discount rate, or any other instrument of policy which the System possesses. Moreover, as will appear upon examination, they are a method of preparing for discount rate changes and making those changes more effective.

Effects of Operations.—Without careful analysis it might be supposed that the effect on the credit situation of a purchase of government securities by the Reserve Banks would be an immediate increase in the total volume of credit. The Reserve Bank purchasing the securities pays for them with Federal Reserve funds. The seller of the securities deposits these funds in his own bank, and that bank in turn deposits the funds in the Federal Reserve Bank and thus finds itself in the possession of additional reserves which could be used for making additional loans or investments. Since these are reserve funds they might form the basis for an increase in the volume of bank credit considerably greater than their dollar amount. One might expect, therefore, that purchases of government securities by the Reserve Banks would result, first, in an increase in the total loans and investments of the Reserve Banks; and, second, in an increase of several times that amount in the total volume of bank credit in use.

As a matter of practice this seldom takes place. It was noted in the preceding chapter that whenever the member banks

are in debt at the Reserve Banks they try to pay off that indebtedness. Under these conditions, when a member bank receives a Federal Reserve check, put into the market through the purchase of government obligations, that bank will ordinarily use the check to liquidate borrowings from the Federal Reserve Bank rather than use it for a further extension of credit. In case the member bank receiving the check is not in debt at the Reserve Bank and therefore employs the funds by purchasing additional investments or making additional loans, the extra amount of credit thus put into the market usually finds its way promptly to some bank which is in debt at the Reserve Bank. Thus the usual effect of a purchase of government securities by the Reserve Banks has been a corresponding reduction in the borrowing of member banks. The action has the effect, not of increasing the volume of credit, but rather of easing the pressure on the banks.

The effect is not limited to member-bank borrowing. Purchases of securities may result in a reduction of the amount of credit which dealers in bills or securities receive from the Reserve Bank under sales contract agreement; or they may result in a reduction in the amounts of bills which are sold to the Reserve Banks. But since the borrowing of member banks has ordinarily been the largest element in the total credit extensions of the Reserve Banks, the usual effect of purchases of securities by the Reserve Banks has been not an increase in their total loans and investments, or an increase in member-bank credit, but rather a reduction in loans to member banks which has about offset the purchase of securities and left the total little changed. At times, however, when the banks in the principal money centers owed the Reserve Banks little or nothing, a state of affairs which has been rare, but occurred in 1922 and 1924 and in several recent depression years, the effects of open-market operations have been more positive, and total loans and investments both of the Reserve Banks and the member banks have increased.

Conversely, when a Reserve Bank sells government securities it receives in payment a check drawn on some member

bank. This check is chargeable against the reserve deposit of the member bank at the Reserve Bank, and the member bank, unless there is some offsetting credit, finds itself deficient in its reserves. In order to correct this reserve deficiency the member bank either borrows from the Reserve Bank or sells it bills, or else throws the burden on some other bank by selling investments or calling loans to brokers in the open market.

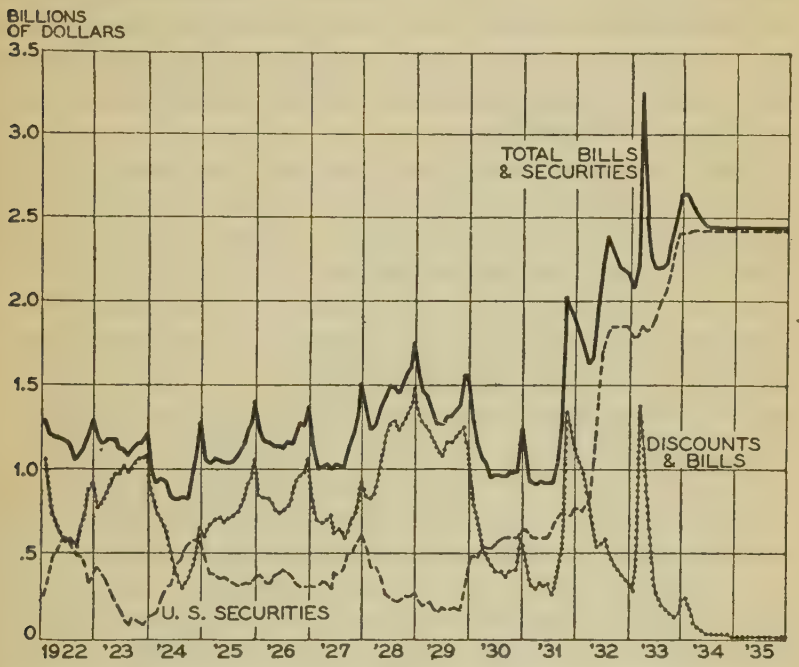


DIAGRAM 36—CHANGES IN PRINCIPAL KINDS OF FEDERAL RESERVE CREDIT IN USE.

The net result is usually an increase in member bank borrowings or in some other form of Reserve Bank credit, which in turn places some pressure on the credit situation without necessarily any decrease in credit volume.

This general tendency for the purchases or sales of government securities to be almost directly offset by changes in other forms of Reserve Bank credit in employment is illustrated in Diagram 36. It will be observed that increases or decreases in holdings of government securities have usually been accom-

panied by almost corresponding decreases or increases in bills discounted and bankers' bills held.

Not an Aid to Earnings.—There are a number of interesting implications which follow from the relationships just described. Some years ago, before there had been any considerable experience in the operations of the System, it was believed that the purchase of government securities by the Reserve Banks was a means of increasing their earning assets and thus supplementing their earnings. In fact, it is probable that the management of some of the Reserve Banks held this view early in 1922, when large increases in holdings of government securities were made.

Experience soon made clear that such purchases did not ordinarily result in increasing the total earning assets of the System, but simply changed one kind of earning asset for another kind. Increases in government securities were offset by decreases in bills discounted and bankers' acceptances. Furthermore, the yield from the government securities was usually less than the yield from loans to member banks, and thus the purchase of government securities diminished instead of increased the earnings of the Reserve Banks. Although the Reserve Banks in the early days sometimes purchased government securities for the purpose of supplementing their earnings, they have not done so for a number of years. The only times at which the purchase of government securities might result in an increase in the earning assets of the System and in increased earnings would be when the member banks, and particularly the member banks in money centers, were substantially out of debt at the Reserve Banks, as in 1934 and 1935. Moreover, the principle has now become firmly established that earnings should be subordinate to credit policy.

How Policy Is Served.—What are, then, the purposes to be served by these operations from the point of view of Federal Reserve policy, since the purchase or sale of securities does not ordinarily affect the amount of Federal Reserve credit in use?

Their importance lies usually in their effect upon the amount of indebtedness of member banks to the Reserve

Banks. By increasing their holdings of government securities the Reserve Banks lighten the indebtedness of the member banks, and by selling securities they increase this indebtedness. The significance of this operation arises from the unwillingness of the member banks to remain continuously in debt at the Reserve Banks. Their lending and investing policy is very closely related indeed to the amount of such indebtedness. This relationship was illustrated by Diagram 34 in Chapter XIV, which showed that interest rates on commercial paper have been high when member bank borrowing has been large, and low when borrowing has been small.

The principle of open-market operations may be summarized by saying that purchases of securities by Reserve Banks tend to relieve member banks from debt to the Reserve Banks, and lead them to adopt a more liberal lending and investing policy. Money rates become easier; bank deposits increase. Such purchases tend to create a borrower's market. Conversely, sales of securities by the Reserve Banks increase member bank borrowing and lead the banks to adopt a somewhat less liberal policy. Money rates grow firmer; bank deposits tend to decline. Sales of securities tend to create a lender's market.

It can thus be seen that buying and selling securities is not only an important independent influence on the credit situation, but may be and often has been used as a means of preparing for discount rate changes and making them more effective. For open-market operations serve to increase or decrease the amount of borrowing subject to the discount rate. If the member banks are not borrowing, any change of discount rate is ineffective, except for its psychological influence. On the other hand if the member banks are borrowing heavily even a small change of discount rate is effective. Thus the effectiveness of discount rate changes largely depends upon the amount member banks are borrowing.

The effects of operations at times when member banks in principal cities are out of debt are more direct. At such times Federal Reserve purchases of securities increase bank reserves. Whether or not the increase in bank reserves forms the base for a multiple expansion of bank credit depends on many at-

tendant circumstances. In 1922 and 1924 such an expansion took place; but in the recent depression years much larger surplus reserves have had only limited effect in expanding bank credit.

It should be added that the purposes of open-market operations have now become so widely recognized that like the discount rate they have now achieved psychological significance. A change in the Federal Reserve government portfolio is interpreted as a signal of a change in policy.

Organization for Open-Market Operations.—Prior to 1922 there was no systematic attempt to coordinate the open-market operations of the twelve Reserve Banks. Each Bank purchased and sold bankers' bills and government securities in accordance with the decision of its own directors, and executed these orders through whatever channels it chose. One consequence of this procedure was constant danger that the Reserve Banks would be raising prices against themselves by competing with one another in the open market, and, moreover, by creating an artificial market for government securities, would complicate the Treasury's program of financing. Because of these dangers the governors of the Reserve Banks, at their annual spring meeting in 1922, appointed a committee consisting of the governors of the Reserve Banks of Boston, New York, Philadelphia, and Chicago (the governor of the Cleveland Bank was added in October, 1922), whose duty it would be to execute purchases and sales of government securities at the request of the different Reserve Banks. It was understood that all transactions not purely local in character should be executed through this committee.

The organization of the committee was a forward step in avoiding competition between the Reserve Banks in the central money market; it did not, however, effect coordination of open-market policy. Concerning the relation of the work of this committee to the several Reserve Banks the following statement was made by Governor Strong of the New York Bank before the House Committee on Banking and Currency in April, 1926:

It is important to know, however, that the supervision of these purchases and sales by the committee was not intended and never has been intended to extend into any interference with the local autonomy of any Reserve Bank, or its relations with its member banks, or its dealing in government securities with its member banks. It simply had to do, in the first instance, with the execution of orders in an orderly way in the open market.[1]

This method of handling System purchases and sales of securities was reviewed by the Federal Advisory Council in September, 1922, and approved. In October of that year, by agreement among the governors of the Federal Reserve Banks, the duties of the committee were extended into the field of policy, and the committee was asked to make recommendations from time to time to the Reserve Banks with regard to their purchases and sales of government securities.

The next important step was taken in the spring of 1923, when the Federal Reserve Board reorganized the committee procedure by itself appointing an open-market investment committee, which consisted of the same members as the committee which had been appointed by the governors. In its new form the committee carried the additional authority of appointment by the Federal Reserve Board.

The principles to be followed by this committee and the terms of its appointment were set forth by the Federal Reserve Board as follows:

> That the time, manner, character, and volume of open market investments purchased by Federal reserve banks be governed with primary regard to the accommodation of commerce and business, and to the effect of such purchases or sales on the general credit situation.[2]
>
> That in making the selection of open market purchases, careful regard be always given to the bearing of purchases of United States Government securities, especially the short-dated issues, upon the market for such securities, and that open market purchases be primarily commercial investments, except that Treasury certificates be dealt in, as at present, under so-called "repurchase" agreement.
>
> In order to provide for the proper administration of the policy de-

[1] U. S. House of Representatives, Committee on Banking and Currency, *Stabilization,* Hearings . . . 69th Congress, 1st Sess. on H.R. 7895, March-April, 1926, Part I, p. 311.

[2] *Ibid.*

fined above, the board rules that on and after April 1, 1923, the present committee of governors on centralized execution of purchases and sales of government securities be discontinued, and be superseded by a new committee known as the open market investment committee for the Federal reserve system, said committee to consist of five representatives from the Federal reserve banks and to be under the general supervision of the Federal Reserve Board; and that it be the duty of this committee to devise and recommend plans for the purchase, sale, and distribution of the open market purchases of the Federal reserve banks in accordance with the above principles and such regulations as may from time to time be laid down by the Federal Reserve Board.

In the autumn of 1923 a still further step in coordinating System open-market policy was taken, when arrangements were made, with the approval of the Reserve Board and the boards of directors of all twelve Federal Reserve Banks, for the creation of a System open-market investment account, to be increased or decreased by the committee, with the approval of the Federal Reserve Board and the directors of the Federal Reserve Banks. The holdings in the special investment account were to be prorated among the several Reserve Banks with due regard to the size of the different banks, their holdings of other earning assets, etc.

It was the understanding that this special investment account should be used as an instrument for carrying out Federal Reserve policy. It offered a more effective means towards this end than any operation which involved dealing with securities held independently by the twelve different banks in their own vaults. Changes in the holdings of government securities by the Reserve Banks since 1923 have reflected largely the changes in this special investment account, whereas most of the changes before that time represented the individual action of the twelve Federal Reserve Banks.

The practice under this general plan of procedure was for the committee of five governors to hold meetings in Washington, New York, or occasionally Boston, Philadelphia, or Chicago several times a year. Any important change in policy was discussed at the semi-annual joint conferences attended by the Federal Reserve Board and by the governors and chairmen of

all Federal Reserve Banks. The conclusions reached by the Open Market Committee were embodied in a formal resolution, which was submitted to the Federal Reserve Board for approval or disapproval. Any policy approved by the Board was then transmitted to all Federal Reserve Banks, and the boards of directors of those banks decided whether or not they would participate in the program. Any policy of importance was so fully discussed in advance that only rarely did a bank decline to participate. Thus every open-market operation of any consequence from 1923 to early 1936 received the definitive approval of the Federal Reserve Board and was subject to the choice of each Reserve Bank as to its participation.

As the result of a growing desire on the part of the Reserve Banks not represented on the Open Market Committee to participate even more fully in policy decisions, a change in the form of organization was made by general agreement in the spring of 1930. The following plan was adopted by the Conference of Governors meeting at that time with the Federal Reserve Board and was approved and put into effect by the Reserve Board.

1. The Open Market Investment Committee, as at present constituted, to be discontinued and a new committee, voluntary in character, to be known as the Open Market Policy Conference, to be set up in its place.

2. The Open Market Policy Conference to consist of a representative from each Federal Reserve Bank, designated by the Board of Directors of the bank.

3. The Conference to meet with the Federal Reserve Board upon the call of the Governor of the Federal Reserve Board or the Chairman of the Executive Committee after consultation with the Governor of the Federal Reserve Board.

4. The function of the Open Market Policy Conference to be to consider, develop, and recommend policies and plans with regard to open market operations.

5. The time, character, and volume of purchases and sales to be governed with the view of accommodating commerce and business and with regard to their bearing upon the credit situation.

6. The conclusions and/or recommendations of the Open Market Policy Conference, when approved by the Federal Reserve Board, to be submitted to each Federal Reserve Bank for determination as to whether it will participate in any purchases or sales

recommended; any Federal Reserve Bank dissenting from the proposed policy to be expected to acquaint the Federal Reserve Board and the Chairman of the Executive Committee with the reasons for its dissent.

7. An executive committee of five to be selected from and by the members of the Conference for a term of one year, with full power to act in the execution of the policies adopted by the Open Market Policy Conference and approved by the Federal Reserve Board, and to hold meetings with the Board as frequently as may be desirable.

8. Each Federal Reserve Bank participating in the Open Market Policy Conference to be considered as waiving none of its rights under the Federal Reserve Act; each Federal Reserve Bank to have the right at its option to retire as a member of the Open Market Policy Conference, but each bank while a member of the Conference to respect its Conference obligations.

Besides enlarging the Open Market Committee to include representatives of all Reserve Banks this plan put into written form a number of practices which had become established through usage. A still further step in giving formal status to open market procedure was taken in the Banking Act of 1933, which for the first time embodied the major outlines of this plan in law.

Reserve Board regulations issued under this Act continued much the same procedure as was outlined above, which had already been developed in practice. The principal added feature was a restriction of open-market operations undertaken by any single Reserve Bank for its own account to emergencies unless the operation received the approval of the Federal Reserve Board.

The four or more meetings a year of the Open Market Committee with the Reserve Board in Washington—for which the legislation provided—proved useful for discussions of many more general matters of Federal Reserve policy and practice. The Executive Committee met every few weeks partly for the conduct of open-market operations and partly because it was frequently asked to consult with the Treasury on financing problems.

Since the principal money market of the country is in New York City, the New York Reserve Bank has executed the

majority of the orders of the committee and the governor of the New York Bank has served by election as the chairman of the committee in its various forms and also as chairman of the Executive Committee. An operating officer of the New York Bank has also served as secretary of the committees and directed the execution of policy.

The Banking Act of 1935 has materially changed the operating mechanism in the direction of further centralization. For the bicameral system of a committee of 12 Bank representatives and a Reserve Board is substituted a single committee composed of the seven members of the Board of Governors of the Reserve System and five representatives of the Federal Reserve Banks elected by the directors of the Reserve Banks in five regions.[3] The decisions of the committee are final and the individual Reserve Banks have no choice but to follow the directions and regulations of the committee with respect to open-market transactions. This provision went into effect on March 1, 1936.

Another section of the 1935 Act requires that all purchases and sales of government securities shall be made in the open market. This has the effect of prohibiting transactions direct with the Treasury. This clause forbids some transactions which have proved useful, such as the purchase on a tax date of special one-day certificates of indebtedness described on page 117, but it provides a safeguard against possible abuse of Federal Reserve facilities. It is a logical accompaniment of the provisions giving greater power over open-market operations to a government board.

Principal Operations and Their Results.—The major operations undertaken by the Reserve System in the purchase or sale of government securities have been as follows:

[3] Section 12A. (a) " . . . Such representatives of the Federal Reserve banks shall be elected annually as follows: One by the boards of directors of the Federal Reserve Banks of Boston and New York, one by the boards of directors of the Federal Reserve Banks of Philadelphia and Cleveland, one by the boards of directors of the Federal Reserve Banks of Chicago and Saint Louis, one by the boards of directors of the Federal Reserve Banks of Richmond, Atlanta, and Dallas, and one by the boards of directors of the Federal Reserve Banks of Minneapolis, Kansas City, and San Francisco. An alternate to serve in the absence of each such representative shall be elected annually in the same manner."

January,	1922 to May,	1922,	purchase of	$	400,000,000
June,	1922 to July,	1923,	sale of		525,000,000
December,	1923 to September,	1924,	purchase of		510,000,000
November,	1924 to March,	1925,	sale of		260,000,000
April,	1926		purchase of		65,000,000
August,	1926 to September,	1926,	sale of		80,000,000
May,	1927 to November,	1927,	purchase of		230,000,000
January,	1928 to April,	1929,	sale of		405,000,000
October,	1929 to December,	1930,	purchase of		560,000,000
June,	1931 to August,	1931,	purchase of		130,000,000
March,	1932 to August,	1932,	purchase of		1,110,000,000
May,	1933 to November,	1933,	purchase of		570,000,000

No change has been made from November, 1933, to the date of writing.

The purchases in 1922, occurred at a time when business was just recovering from the depression of 1921 and when agricultural prices were seriously depressed. These purchases, together with gold imports, had the effect of enabling member banks to reduce their indebtedness at the Reserve Banks from over 1 billion to 400 million dollars, and thus put the banks of the country in a position to advance funds more freely to their customers, and aided in the recovery of business and agriculture from the conditions of 1921. Since part of the purchases occurred when member banks in principal centers were largely out of debt to the Reserve Banks and purchases were accompanied by gold imports, there was, following the purchases, an increase in the total amount of bank credit in use. The purchases were followed by reductions in the discount rates of several of the Reserve Banks.

The sale of securities from June, 1922, to July, 1923, took place at a time when business recovery had progressed to a point where excesses were beginning to develop, prices were rising rapidly, a labor shortage was beginning to be apparent, and there was evidence of too rapid expansion in some industries. The sale of securities resulted in an increase in the direct borrowing by member banks, thus putting upon them more largely the responsibility for the amount of credit in use, and at the same time the cost of borrowing was raised by increases in the discount rates of the New York, Boston, and San Francisco Reserve Banks. The sales, together with rate

changes, probably aided in giving stability to the situation and preventing a period of over-expansion.

The purchases between December, 1923, and September, 1924, which were the first ones to be handled as a part of the joint investment account, were made at a time of some business recession and price decline. They were made at a time also when certain of the European countries were beginning to consider the return to the gold standard. It was believed that this attempt, the success of which would benefit the United States with the rest of the world, would be considerably furthered by moderately easy money conditions in the United States. The purchases during 1924 had the effect of reducing the amount of indebtedness of member banks at the Reserve Banks, particularly in principal cities. Simultaneously, a number of the Reserve Banks lowered their discount rates. This made it possible for the member banks to extend credit more freely and money conditions were consequently easy. As in 1922, there was a considerable increase in the total volume of credit.

The sale of securities between November, 1924, and March, 1925, was made at a time when business was at a high level, speculation was active, and prices were rising. It had the effect of increasing somewhat the responsibility of the member banks for the current amount of bank credit in use, and led the way to an increase of the discount rate by the New York Reserve Bank.

The purchase and sale in 1926 were smaller in amount but occurred under circumstances somewhat similar to those described in the preceding paragraphs.

The purchase between May and November, 1927, is one around which considerable controversy has arisen. Because of lack of adequate understanding the impression has been created by some commentators that this purchase was solely directed towards aiding Europe towards the restoration of the gold standard. It is true that Europe appeared to be in a critical final phase of the restoration of monetary stability. The French revaluation had not taken place but appeared probable. The American position was so influential abroad,

especially since Europe's gold was flowing here in a steady stream, and the restoration of world stability was deemed so important to America, that the Reserve System sought the fullest information as to conditions abroad by inviting to the United States representatives of various European central banks.

Dr. G. Vissering, President of the Netherlands Bank and Mr. G. Bachmann, President of the Swiss National Bank were visitors in March; Mr. Montagu Norman, Governor of the Bank of England, Dr. Hjalmar Schacht, President of the Reichsbank, and Mr. Charles Rist, Vice Governor of the Bank of France were here in July; and Mr. Louis Franck, President of the National Bank of Belgium visited the United States in September.

The information these gentlemen brought had some weight in the decisions reached. But there were other important circumstances. Wholesale prices had been declining steadily in the United States for two years and the decline had amounted to about 10 per cent. There was a sharp decline in business activity and apprehension of further decline. It was under these circumstances that a policy of buying securities was discussed at a joint conference of governors and chairmen of all Federal Reserve Banks in May and was formally approved by the Federal Reserve Board. In the late summer and early autumn the discount rates of several of the Reserve Banks were reduced from 4 to 3½ per cent.

Partly due no doubt to the action taken, the economic situation was reversed rapidly. Business stopped declining and started up, wholesale prices steadied, the gold movement changed from imports to exports—and with it all security prices began to climb and to use more credit in the process.

This rise in security prices and the attendant credit expansion became in succeeding months a dominating influence in the country's economy. The next open market operation was a sale of securities to deal with this situation. Through Federal Reserve sales of securities, gold exports, and credit expansion the member banks had by the middle of 1928 been placed under the pressure of a billion dollars of debt to the Reserve

Banks. But the sale of practically all the securities held by the Reserve Banks, together with three discount rate increases in New York and others elsewhere, proved only partly effective at home and attracted more funds from abroad, and the speculation moved forward to its climax in 1929.

As soon as the break occurred in the fall of 1929 the System acted to relieve the pressure for liquidation. Huge purchases

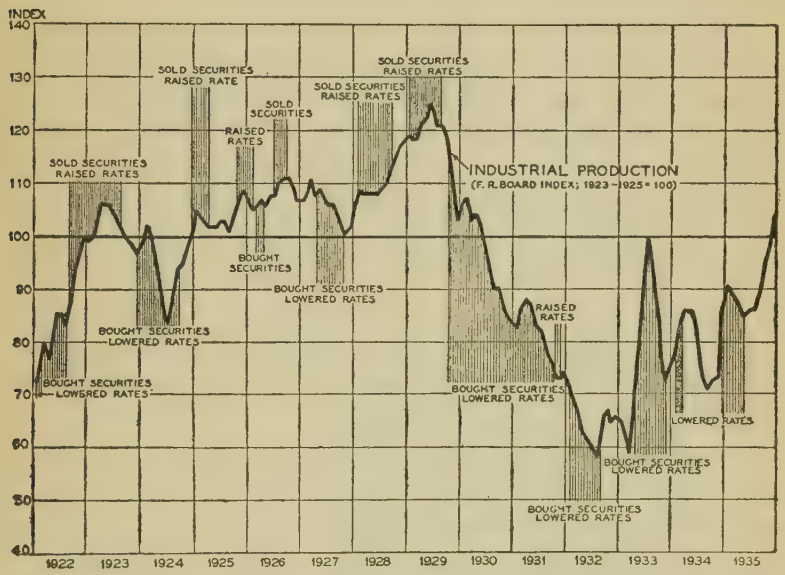


DIAGRAM 37—TIMING OF PURCHASES AND SALES OF GOVERNMENT SECURITIES AND DISCOUNT RATE CHANGES COMPARED WITH CHANGES IN THE VOLUME OF INDUSTRIAL PRODUCTION.

of securities from 1929 to 1933 were directed first towards making available funds which member banks might use to get out of debt and secondly, and later, towards creating some surplus of reserves, which might exercise a positive pressure towards credit expansion. Purchases towards these ends totaled altogether over two billion dollars. Security holdings remained unchanged in amount through 1934 and 1935.

The general timing of open-market operations since 1922 in their relation to the country's economic life is illustrated in Diagram 37 in which shaded areas indicate the times when purchases or sales of securities were being made, and the solid

line shows the movements of an index of industrial activity. The diagram shows that purchases of securities have always been made in times of business recession and have usually been accompanied by discount rate reductions. Sales of securities have been made at times of business activity and have usually been accompanied by discount rate increases. Thus Federal Reserve policy has been a compensating influence directed towards greater business stability.

Diagram 37 of course shows only one measure of the varied economic changes to which open-market policy was related. An attempt is made in Diagram 38 to show some of the other phases of the background panorama. On the basis of these additional data the generalizations made above may be broadened by saying that purchases of securities have been made at times of business recession, declining prices, heavy member bank debt, and declining or stagnant credit volume, and that purchases have usually been accompanied and followed by a reduction in member bank debt, reduction in interest rates, increased volume of credit, steady or rising commodity prices, and at times by business recovery.

Sales of securities have been made at periods of active business, rising prices, and expanding credit and have been followed by increases in member bank borrowing, higher interest rates, a check in credit expansion, and often a moderation in business expansion.

Perhaps the most striking feature of this whole experience, however, is the difference in the effectiveness of open-market operations in the earlier and the later parts of the period. From 1922 through 1927 the response of the economic organism to relatively small changes in Federal Reserve policy was extraordinary. But in 1928 and 1929 and later in the depression even the most vigorous measures taken by the Reserve System had relatively little effect. Member bank borrowing, interest rates, and the growth of bank credit did indeed respond in a measure but these in their turn failed to influence the country's economy. The expansion of bank credit was checked in 1928 and 1929, but other lenders appeared and

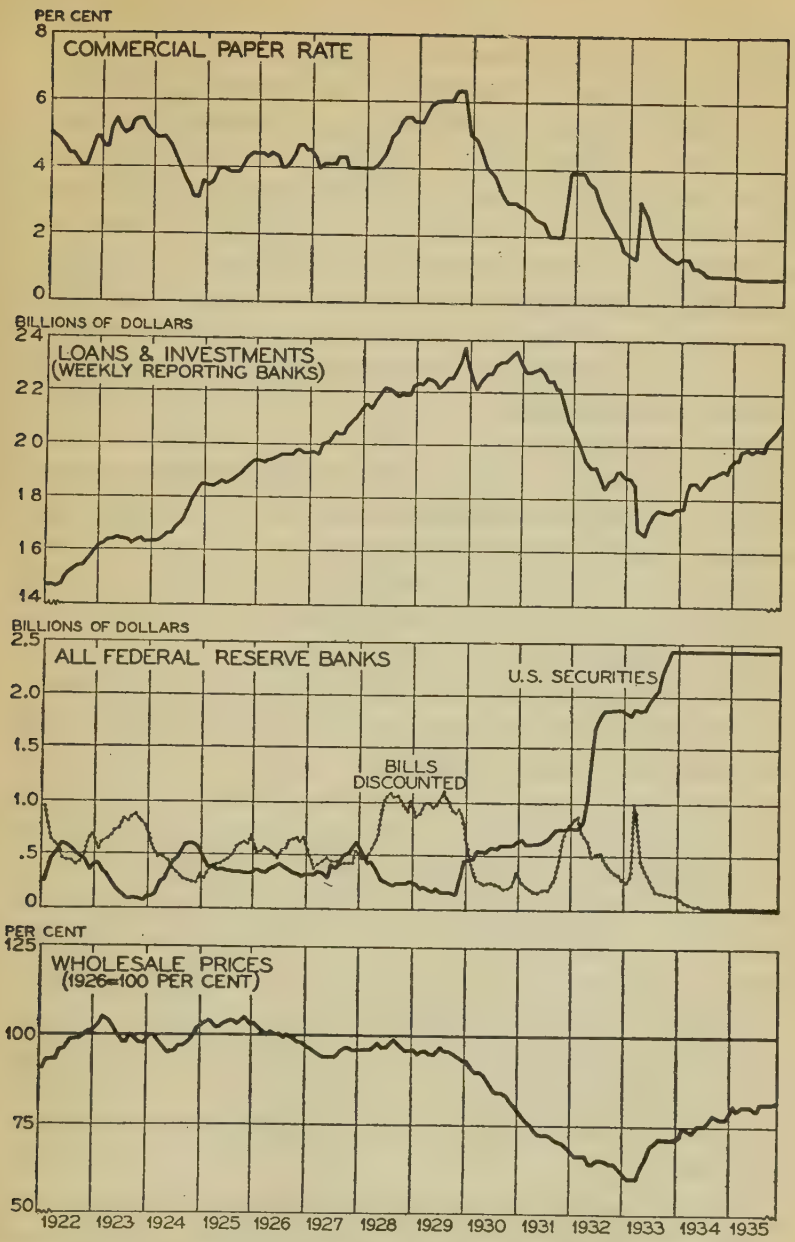


DIAGRAM 38—VOLUME OF DISCOUNT AND OPEN-MARKET OPERATIONS AND SOME OF THE RELATED ECONOMIC MOVEMENTS.

the increased rate of turnover or "velocity" of bank credit made up for lack of growth in volume.

In the depression bank credit failed to respond vigorously even to large surplus reserves, and to the extent that additional credit was created its effectiveness was reduced by slow velocity. All of this will be discussed more fully later and it is sufficient to point out here that a bank of issue is not omnipotent. The effectiveness of its policy operations is dependent on a wide range of surrounding circumstances including economic psychology, the character of the banking system, governmental policy, etc. Federal Reserve policy is no substitute for a sound economy.

Other Operations.—In addition to the open market operations for executing general credit policy, which have been discussed in the preceding pages, purchases and sales of government securities for the special investment account have been made in small amounts and for brief periods, to exercise a stabilizing influence in the money market.

One illustration of this type of operation has been the occasional purchase of securities for the special investment account over the last week of the year, when there is an unusually heavy demand for funds, and the sale of these securities after the turn of the year. The purchase of 50 to 100 millions of securities in the last week of December has had at times the effect of putting funds into the money market to meet the extraordinary demands of that season and so preventing too great stringency; and the later sale of these securities in January has had the effect of absorbing in part the return flow of currency from circulation and the transfer of funds from the interior to the money centers. The purchase or sale of securities has also been made at times to neutralize effects on the money market of unusually large or sudden gold movements.

But open market operations find their major use as one of the most effective instruments of the Reserve System in its efforts towards creating monetary conditions which will favor economic stability.

SUMMARY

1. While the Federal Reserve Act gives the Reserve Banks broad powers to deal in the open market, in practice the majority of operations have been in bankers' acceptances and government securities; and open market policy has found expression largely in purchases and sales of government securities.
2. Purchases or sales of government securities by the Reserve Banks do not ordinarily increase or diminish the amount of Reserve Bank credit in use, for they are usually offset by changes in member-bank borrowing and acceptances owned.
3. Purchases of government securities do not ordinarily increase the earnings of the Reserve Banks, because purchases are offset by declines in other earning assets.
4. The effectiveness of purchases and sales of government securities as an instrument of policy lies usually in their influence on the indebtedness of member banks at the Reserve Banks. Purchases enable member banks to pay off loans and thus tend to make money easier; sales lead banks to borrow more heavily and thus tend to make money firmer. Government security transactions supplement and enforce discount policy.
5. Coordination of System open market operations has been secured through a Federal open-market committee composed at first of governors of Federal Reserve Banks but now composed of the 7 members of the Board of Governors of the Reserve System and 5 representatives of the Reserve Banks.
6. Purchases of government securities have been made in periods of business recession and price weakness, and have usually been followed by the credit conditions which may be described as a borrower's market.
7. Sales of government securities have been made in periods of active business, rising prices, and heavy speculation, and have usually been followed by the credit conditions which may be described as a lender's market.
8. During the years 1922 to 1927 money conditions and bank

credit proved quickly responsive to open-market operations but from 1928 to 1935 even larger operations produced much smaller results. The effectiveness of operations clearly depends on general economic conditions.

9. Aside from operations as matters of general credit policy, purchases and sales of securities have been made at times to stabilize the money market against unusual temporary disturbing influences such as the year-end stringency.

CHAPTER XVI

Other Instruments of Policy

PRECEDING chapters have discussed the two principal methods by which Federal Reserve policy finds expression —the discount rate and open-market operations. This chapter will deal with two other policy instruments which have been used in the past and two new instruments created by recent legislation. These are:

Direct dealing with individual banks.
Publicity.
Changing member bank reserve requirements.
Adjusting margin requirements on security loans.

Direct Dealing with Individual Banks.—Discount rate and open-market operations are impersonal and general, but the adjustment of credit to trade is in practice personal and individual. The volume of bank loans is decided when bankers and business men sit down together and agree on a line of credit. In somewhat the same way the amount of Federal Reserve credit in use is determined when the member banks come to the Reserve Banks for funds. It is, therefore, natural that many people familiar with the bank and customer relationship should think of the direct contact of Reserve Banks and member banks as offering the best opportunity to control the total amount of Federal Reserve credit. The reasons why this apparently simple and direct means of credit control, known at times as "direct action," has not in fact proved very effective were set forth in Chapter IV. The gist of the matter is that the Reserve Bank officials would find it in practice almost impossible to ration credit between member banks. By the nature of the case the relationship of Reserve Bank and member bank is quite different from, and more impersonal

than, the relation between the commercial bank and its customer.

Borrowing is, with certain limitations, a right of the member bank, and most borrowing goes forward in course without involving any special question of policy. It is the duty of a Reserve Bank to see that the paper offered it conforms to the technical provisions of law with respect to eligibility, and to see that it is good, that it will be paid at maturity. The further responsibilities of the Reserve Banks as set forth in the annual report of the Reserve Board for 1926, quoted in Chapter IV, relate to the prevention of the abuse of the borrowing privilege by banks which borrow more than their share of Federal Reserve funds. The more recent legislation adds a further objective to lending policy: "the maintenance of sound credit conditions, and the accommodation of commerce, industry, and agriculture;" and loans may be refused any bank which is making undue use of bank credit "for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions."[1]

These provisions make clearer the responsibility and power of the Reserve Banks for dealing with that limited number of members which are clearly abusing the borrowing privilege by using Federal Reserve credit for too long periods or in too large amounts or are obviously expanding credit for speculative purposes too freely. The correction of these cases of abuse is an influence of some importance in maintaining a sound credit situation; but it is easy to overemphasize this importance. "Direct action" is a method adapted to dealing with a few banks obviously borrowing too freely. To attempt to apply it more generally would involve endless controversy as to what constitutes "undue use of bank credit," and would place the Reserve Banks in a position of assuming responsibility for the management of member banks.

While the limitations which have been noted stand in the way of effective control of the volume of credit through the

[1] Section 4, paragraph 8, of the Federal Reserve Act as amended by the Banking Act of 1933.

power to grant or deny loans, the Reserve Banks may at times exercise an important influence on the general credit situation through the informal suggestions which they may make to bankers. The Reserve Banks, as impartial, non-profit-making organizations, in some sense instrumentalities of the government, occupy in each district a position of some authority and their suggestions to bankers are treated with considerable respect, somewhat as are the views of the banks of issue in other countries. The informal influence which they exercise in this way may at times prove more important than their formal action under the law. It is an influence to be exercised with the utmost discretion and would vanish with excessive use.

Publicity.—At times the views of the officials of the Federal Reserve System with respect to financial conditions have been made public through the official publications of the System or through other forms of public statement. These statements have sometimes constituted an instrument of policy fully as effective as specific action which might be taken. The statement issued by the Reserve Board in February, 1929, warning against the excessive use of credit for security speculation, was an example of this sort. Here again the effectiveness of the instrument has depended upon the rarity of its use. No body of men is wise enough to rule the complicated financial affairs of this country through oracular pronouncements. Ordinarily the most effective way for a bank of issue to make known its views is by its action through discount rates, open-market operations, etc. This is partly because it is much easier for any group of responsible men to agree upon what to do, than to agree upon a statement of why they did it; so that the action taken by public or semi-public bodies is at times wiser than the avowed reasons for the action.

In an earlier chapter[2] the provisions of the Banking Act of 1935 with regard to publicity on reasons for Federal Reserve policy action were described. Since the publication of reasons will ordinarily take place some time after the event, this provision of law is likely to prove more potent in its effect on

[2] Chapter XIV, p. 222.

those who make the decisions and have to justify them in this manner, than as a direct influence on the credit situation.

But aside from policy statements the Reserve System has also exerted an influence through its publication of a wide range of information, not only concerning the Federal Reserve System itself but credit and business conditions. The weekly published statement of the condition of the Federal Reserve System is one of the most complete and revealing statements published by any bank of issue in the world, and in addition the Board of Governors publishes in weekly form a report of the condition of member banks in principal cities, and reports of the volume of bank transactions in principal centers throughout the United States. Daily reports of gold exports and imports at New York and daily foreign exchange rates at New York are released by the New York Reserve Bank. The Board of Governors publishes a monthly bulletin containing a comprehensive review of credit and business conditions and each of the twelve Federal Reserve Banks publishes a brief monthly review of conditions in its own district. Copies of these publications are available not only to the member banks, but to the general public as well and have wide circulation. The availability of this information may well prove in the long run as important a factor making for financial stability as discount or open-market policy.

Changing Reserve Requirements.—When the so-called "inflation amendment" to the Agricultural Relief Act was passed in May, 1933, providing for revaluing the dollar, printing greenbacks, or expanding Federal Reserve purchases of government securities, the Congress appended to this bill a clause creating a new method of control over some of the possible consequences of the inflationary provisions of the bill. The method of control was to change the amount of reserves which member banks were required by law to carry in Federal Reserve Banks. The inflation provisions of the bill if put into effect would increase member bank reserves by many billions of dollars. By increases in reserve requirements some of these additional reserves could be absorbed when necessary and thus be prevented from forming a basis for expansion of bank credit.

The section of the bill conferring these powers was in the form of an amendment to the Federal Reserve Act and read as follows:

> Notwithstanding the foregoing provisions of this section, the Federal Reserve Board, upon the affirmative vote of not less than five of its members and with the approval of the President, may declare that an emergency exists by reason of credit expansion, and may by regulation during such emergency increase or decrease from time to time, in its discretion, the reserve balances required to be maintained against either demand or time deposits.

As further consideration was given to the terms of this bill after its passage, certain defects became obvious. Before action could be taken the President would have to declare that an emergency existed by reason of credit expansion. The barn door could thus be locked only after the horse was stolen. Action to be effective should be taken before credit expansion had created an emergency. Moreover, any President would hesitate about declaring that an emergency existed. There is no way to create an emergency faster than to make such an announcement.

In the light of these difficulties the Banking Act of 1935 included a revision of the power to alter reserves, as follows:

> Notwithstanding the other provisions of this section, the Board of Governors of the Federal Reserve System, upon the affirmative vote of not less than four of its members, in order to prevent injurious credit expansion or contraction, may by regulation change the requirements as to reserves to be maintained against demand or time deposits or both by member banks in reserve and central reserve cities or by member banks not in reserve or central reserve cities or by all member banks; but the amount of the reserves required to be maintained by any such member bank as a result of any such change shall not be less than the amount of the reserves required by law to be maintained by such bank on the date of enactment of the Banking Act of 1935 nor more than twice such amount.

Thus the power to alter reserves was placed in the Board of Governors of the Reserve System without action by the President, and preventive rather than curative action was contemplated. The amount of increase was limited to 100 per

cent, to relieve possible apprehension of too severe action which might be a deterrent to the use of then existing excess reserves. The character of increases was also more closely prescribed.

Through this legislation a new and hitherto untried instrument of bank of issue policy has been created. Some such instrument was essential, for gold revaluation, gold imports, and issues of silver certificates have created, and are still creating, a volume of bank reserves quite unmanageable by the ordinary methods of control. As this is written, early in 1936, excess reserves are considerably larger than all the government security holdings of the Reserve Banks. These entire government holdings could be sold without absorbing all the excess reserves. The problem is simple; the bank of issue must have a sponge big enough to absorb all the excess reserves before it can gain any real control over credit. If excess reserves were to continue to increase as rapidly as in 1934 and 1935, on top of present reserves, they might easily reach an amount even larger than could be controlled by a 100 per cent reserve increase plus a complete sale of government securities, especially if the Treasury should put to use any considerable amount of the Stabilization Fund.

But, there is also a question in management. The surplus of reserves is not distributed evenly among the banks of the country—some banks have more excess, some less; a few have none. When reserve requirements are increased some banks will be hit much harder than others. It will be difficult to raise reserve requirements high enough to mop up a substantial part of the excess reserves without embarrassing some banks. But despite these limitations the power is a most useful addition to the System's mechanism for credit control, especially as a means for dealing fundamentally with the large excess of reserves created by the extraordinary events of the depression emergency.

Control of Loans on Securities.—Economic fluctuations in this country have frequently been accentuated by security speculation. This was especially true in the expansion of 1928 and 1929 and the subsequent depression. The ills of that pe-

riod may perhaps be laid more specifically to security speculation than to any other single cause, though this distinction might be disputed by speculation in real estate. It was natural that when the causes of the depression were examined and the remedies sought, they should include means for checking security speculation. The proposals finally embodied in law are contained principally in three Acts: The Banking Act of 1933, the Securities Act of 1933, and the Securities Exchange Act of 1934.

The Banking Act of 1933 made two principal approaches to the problem. First, it divorced the business of handling new issues of securities, except for government and municipal issues, from the banks of the country, both by forbidding the banks to underwrite such issues and by divorcing from the banks their security affiliates. Second, it placed certain restrictions on the availability of credit for carrying securities. Several sections of the Act, as noted earlier, empower the Reserve Board and banks to curtail the use of Federal Reserve credit by banks which in the judgment of Federal Reserve officials may be making credit too freely available for security speculation. The Act also prohibits member banks from acting as the agents of corporations and individuals in the making of loans on securities—loans which in the past have been classified as "loans for account of others." While, as was indicated before, the provisions curtailing Federal Reserve credit to banks which may be lending unduly for speculative uses will be exceedingly difficult to administer, the prohibition upon "loans for account of others," probably checks a serious abuse. The accompanying diagram shows the extent to which increases in prices of equity securities in the boom years of 1928 and 1929 were supported by these loans. Their existence constituted a major impediment to the effectiveness of Federal Reserve policy in dealing with the expansion during this period. Member bank security loans, both to brokers and to private customers were under reasonable control but these loans by others were quite out of control.

The Securities Act of 1933 was confined to dealing with a single problem, that of new issues, and set up a mechanism

by which new issues of securities, except for certain exempted classes which were already subject to the supervision of some

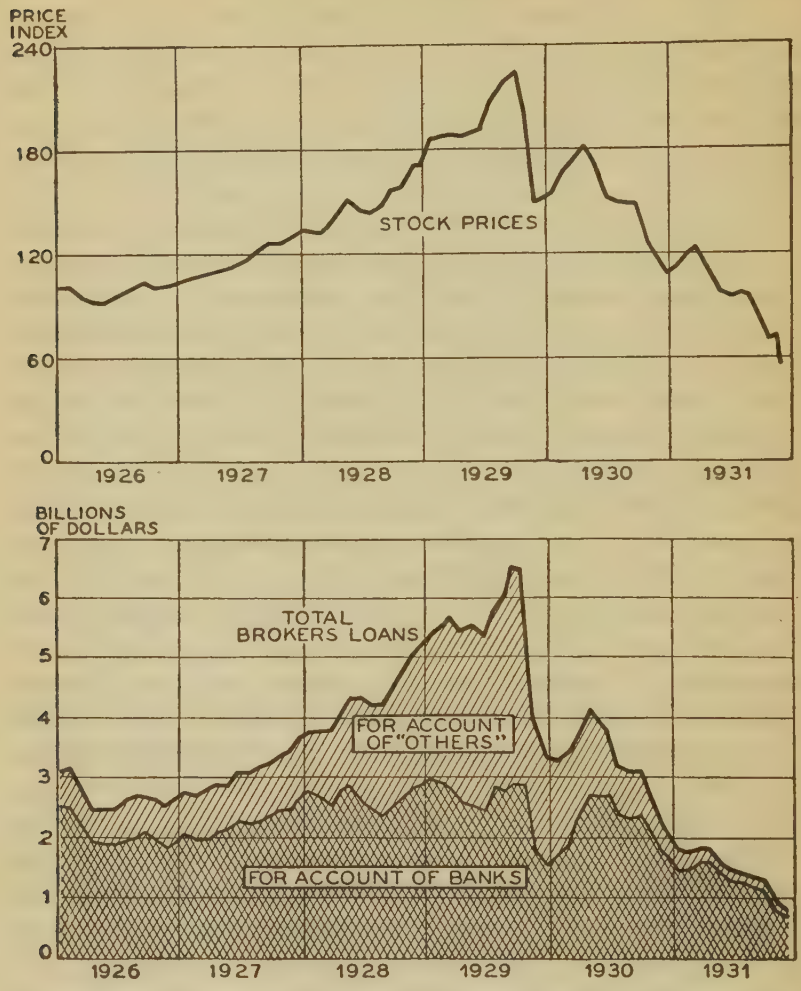


DIAGRAM 39—INCREASES IN SECURITY PRICES IN THE BOOM YEARS OF 1928 AND 1929 WERE SUPPORTED MOST LARGELY BY LOANS TO BROKERS FOR ACCOUNT OF "OTHERS"—CORPORATIONS AND INDIVIDUALS.

government agency, might be placed under regulation which would insure the disclosure of full information about each issue.

The Securities Exchange Act of 1934 was directed toward

the regulation of securities exchanges and was designed to avoid manipulation and other improper practices, to insure full disclosure of information as to securities dealt in, and finally, to restrict the amount of credit used in carrying securities. The last of these three was perhaps the most important, for excesses in the security markets have fed upon the use of credit. The stock exchange mechanism in this country has provided perhaps a freer use of credit for security speculation than exists in any other country. This free use of credit has encouraged the upward swing of prices in times of expansion, and, on the other hand, the calling of loans when prices decline has accentuated liquidation. Under the Securities Exchange Act the Board of Governors of the Federal Reserve System was given authority to "prescribe rules and regulations with respect to the amount of credit that may be initially extended and subsequently maintained on any security (other than an exempted security) registered on a national securities exchange." Because of the great influence of security speculation upon business movements in the United States, this new power given to the Reserve System constitutes an important additional instrument of control. It is a form of control which differs from most of the policy instruments of the System in the directness with which it is related to the specific uses of credit. It is a form of "direct action" but a form so defined and specific as to be much more practical and effective than any general attempt at direct action, such as has been discussed previously.

Under this provision of law the Reserve Board has drawn up regulations prescribing margins for brokers' loans to their customers, has set up an administrative office, and has arranged for periodical reports to keep itself informed. This procedure has been established without apparently any serious interference with the normal legitimate operation of the security markets. Similar regulations for bank security loans have also been issued. How effective this type of control is destined to be is, of course, as yet problematical. It is a form of control which is in some degree paternalistic and restrictive, but speculation in securities had proved itself so destructive

of economic stability in this country that some vigorous form of control of this sort appeared to be necessary. The legislation has placed upon the Reserve System a responsibility which is likely to prove onerous, for the System will find itself at times required by circumstances to take action which will directly and immediately influence the profits and even solvency of considerable groups of people. But it seems safe to predict that, whether or not this particular form of control proves desirable and feasible, some mechanism will be found for restraining the excessive use of credit in security speculation.

Distribution of Powers.—Before concluding this description of Federal Reserve powers for the control of credit it may be well to note the way in which these powers are distributed among the several parts of the Federal Reserve System:

Powers	*Determined by*
Discount rates	Reserve Banks and Board of Governors
Open market operations	Federal Open Market Committee
Direct dealing with individual banks	Federal Reserve Banks, with some checks by the Board of Governors
Publicity	Board of Governors and Reserve Banks
Changing member bank reserve requirements	Board of Governors
Adjusting margin requirements on security loans	Board of Governors

As noted earlier coordination in the use of these powers is effected through joint conferences of the Board of Governors with the Presidents of the Reserve Banks, through the Open Market Committee, and through frequent informal contacts.

The possession of new powers under recent legislation has introduced a number of complications which should be noted in passing. When any one of the several policy-forming bodies in the Federal Reserve System sits down to plan a course it now has to consider a larger number of alternative sorts of action. The difficulty is thus increased of obtaining wholehearted agreement on any single course of action. This ques-

tion indeed goes beyond the interior mechanism of the Federal Reserve System, for every policy decision is in some sense political in the broadest meaning of the word. Like other public bodies the Federal Reserve System requires for full effectiveness of action the general sympathy and support of a substantial body of public opinion. The more alternative forms of action are available, the harder it is to be sure of public understanding and public support.

Another sort of complication arises from the nature of some of the new methods. The System's powers may be broadly classified into two general sorts: on the one hand, powers to deal with the whole credit situation, which include the discount rate, open-market operations, and the adjustment of reserve requirements; and on the other hand, powers to deal with specific situations, which include direct dealing with individual banks (or "direct action") and the adjusting of margin requirements on security loans. The first of these two groups of powers is within the field of the traditional function of a bank of issue, which is to influence the volume and price of credit in general. The other group is more direct and more specific. Recent legislation has added new powers to each group, and in so doing has tended to complicate the old question discussed in Chapter IV of whether wholesomeness of a credit situation can be restored by dealing with a few specific instances of abuse, or whether more general action is necessary.

This chapter should not be concluded without a further reminder that recent legislation has placed added powers to influence the credit situation in the hands of the Treasury, as described earlier. The coordination of Federal Reserve and Treasury action is a part of the problem just described.

SUMMARY

1. There are four other major policy instruments besides the discount rate and open market operations:
   a. Direct dealing with individual banks.
   b. Publicity.

c. Changing member bank reserve requirements.
d. Adjusting margin requirements on security loans.

2. Direct dealing with individual banks, known as "direct action" is not an effective method for controlling the general volume of bank credit; but it is an effective method for dealing with the limited number of banks which tend to abuse the borrowing privilege. Recent legislation has strengthened the power of the Reserve System for handling these cases.
3. The Board of Governors and the Reserve Banks, as impartial public bodies, also exercise an important influence through their informal suggestions or public statements, but this sort of influence owes much of its effectiveness to the rarity of its use.
4. The full publication of economic information by the Reserve System is an influence toward financial stability comparable in importance with specific instruments of policy.
5. The newly-conferred power of the Federal Reserve System to change reserve requirements of member banks constitutes a necessary power for the fundamental readjustment of bank reserves expanded by gold revaluation, gold imports, and silver legislation.
6. The power to fix margin requirements for security loans made by brokers and member banks is a somewhat paternalistic power difficult to administer, but is a logical attempt to deal with a destructive use of credit in security speculation.
7. New powers of the System have the incidental disadvantage of making more complex the problem of reaching policy decisions.

CHAPTER XVII

Major Policy Problems

DURING the twenty-one years the Federal Reserve System has been in operation the United States has gone through two of the most severe credit expansions and contractions in its history. It was this record which provoked the comment recently by a writer in the London *Economist:*

> The Federal Reserve authorities have never yet been able to control an expansion of credit.

It is pertinent to recall that, when the Federal Reserve bill was under discussion in Congress, Elihu Root, at that time a senator and one of the ablest of the opponents of the bill, argued that the proposed new banking legislation would launch the country on a "career of inflation."[1]

Any attempt to answer fully the questions raised by these two critics of the Reserve System would involve a thoroughgoing analysis of the economic events of the past two decades and a critical historical review of the operation of Federal Reserve mechanism and policy. That is obviously out of place in a book of this character; but the writer cannot resist the temptation to include in this chapter a brief outline of the principal policy problems which the System has faced in its two decades, and the kind of response the System has made to these problems.

At the outset it may be noted that the two great expansions and contractions which the United States enjoyed and suffered were not peculiar to this country. Although the two crises were markedly different in type, they were shared by many countries. The war expansion was characterized by huge swings in commodity prices, almost simultaneous in time though differing in amounts between countries. The more recent boom brought little commodity price rise but an extended

[1] Speech in the Senate, December 13, 1913.

rise in stock prices in London, Paris, and Berlin, as well as New York, and it brought also simultaneous movements in production. In the succeeding depression commodity prices dropped, all over the world. The movement of wholesale prices and production in five countries is shown in Diagram 40. In both periods the general similarities of movement between countries are more marked than the differences. Both crises were international in scope.

It should also be noted that the very terms of the original Federal Reserve Act created a basis at the outset for added expansion; for under the provisions of the Act the legal requirements for the reserves which member banks had to maintain were greatly reduced. The requirement for New York City banks, for example, was reduced from 25 per cent to 18 per cent of their demand deposits and from 25 per cent to 5 per cent of their time deposits, and somewhat corresponding reductions were made for other banks.[2] The result was to create immediately large surplus reserves available for employment. In 1915, for example, member banks held surplus reserves of over $800,000,000.

Thus the early years of the World War found the monetary mechanism of this country all set for an expansion of credit, both by reason of the presence of excess reserves and the elasticity of the new banking system. The possible danger in this position was recognized by the Reserve System, and in 1916 the Federal Reserve Board asked from Congress (but did not receive) authority to raise reserve requirements of member banks.[3] A year later, in June, 1917, after the country entered the World War, and credit needs had vastly increased, the Board recommended, and the Congress voted, an even further reduction in reserve requirements.[4] Since the excess of reserves continued until the United States entered the war, the member banks did not find it necessary to borrow at the Reserve Banks until that time; instead they were continuously in possession of free funds.

[2] See Chapter III, p. 30.
[3] *Annual Report* of the Federal Reserve Board, 1916, p. 26.
[4] Ibid., 1917, p. 12.

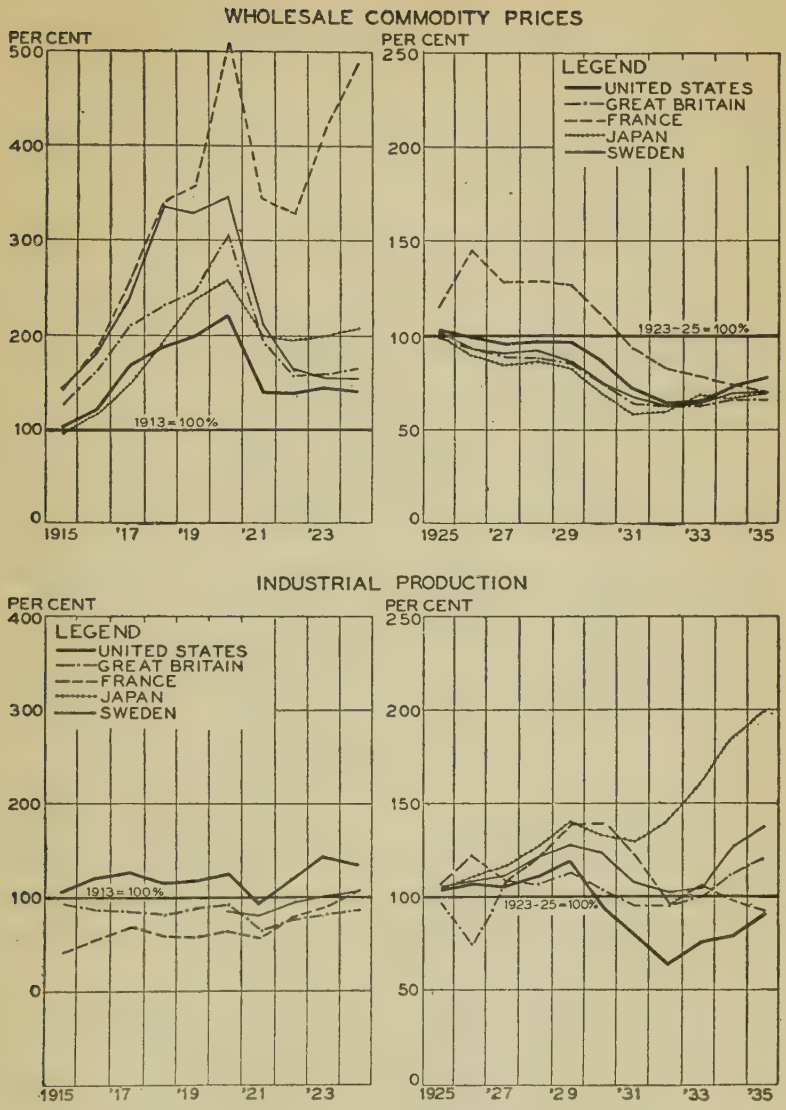


DIAGRAM 40—INDUSTRIAL PRODUCTION AND WHOLESALE COMMODITY PRICES IN IMPORTANT COUNTRIES OF THE WORLD.

War and Post-War Expansion and Crisis.—For over two years before the United States entered the war its industries reaped the advantages of war through large exports, while the country suffered few of its penalties. In order to pay for munitions and supplies which they purchased in this country the belligerent powers shipped here large quantities of gold and sold their own bonds in our markets (in addition to liquidating considerable amounts of American securities owned by their nationals). These forces, together with a world-wide price increase, added to an already abnormally large supply of excess bank reserves, conduced to an expansion of credit and a price rise here, which by April, 1917, had lifted wholesale commodity prices 64 per cent above the 1913 level.

When this country entered the war further expansion of credit became almost inevitable. The demands for goods and services were very great; the expenditures of war were so enormous and so sudden that it would have been next to impossible to meet them from taxation alone. Hence the war was financed by bond sales supported by increases in bank credit.

Under the Reserve System with its great power of elasticity the war credit expansion proceeded without any automatic checks. The United States was not forced to resort, as were many other countries more deeply engulfed by the war, to emergency methods of financing such as the issuance of paper money by the government or direct government borrowing from the bank of issue. Nevertheless, in this country as elsewhere, the expansion of credit and rise in prices continued many months after the end of the war, though the expansion was less severe here than in other countries.

From the purely economic viewpoint the Federal Reserve System should have acted more promptly and vigorously in checking the post-war expansion. What interfered was government financing. The great Victory Loan, to pay for the final costs of the war, was not sold until May, 1919, and the Treasury believed it had a substantial commitment to keep money relatively easy for some months after the sale of the Victory notes, which many had purchased on the instalment

plan or by borrowing from banks. For this reason discount rate increases were postponed. Much the same thing was happening in other countries as well.[5]

The Reserve System did attempt to deal with the situation, first by warnings and attempts to curb loans for "non-essential" uses, which proved ineffective, and finally by discount rate action which was begun in the autumn of 1919, and followed up with vigorous rate increases early in 1920. While credit expansion continued until late 1920, the price and business boom reached its peak and began to subside before the middle of 1920, and depression ensued. Not unnaturally public opinion which at such times is always strong and often uninformed, placed blame in the wrong place, and the agricultural bloc in Congress attacked the so-called Federal Reserve deflation policy of 1920. The real responsibility, to the extent that the situation was at all subject to control, lay largely in those events and policies which induced the boom and allowed it to go as far as it did.

The political attacks on the Reserve System for its energy in raising the discount rate in 1920 had unfortunate results. Governor Harding of the Federal Reserve Board was not reappointed when his term expired in August, 1922. At later periods when vigorous Federal Reserve action was again necessary the political reaction of 1920 and 1921 was a spectre in the background.

One broad conclusion which may be drawn from the war and immediate post-war expansion and subsequent deflation is that in time of war no bank of issue can be independent in its policy. The country's whole energies are devoted to winning the war, and all else must be subordinate. At the end of a war it is difficult for a bank of issue to recover its proper measure of independence, and the Reserve System had no prewar experience, tradition, and prestige. Some of these same considerations apply to the place of the bank of issue at a

[5] For a nearly contemporary review of the policy of this period see Gov. Benjamin Strong's testimony before the Joint Commission of Agricultural Inquiry, August 2-11, 1921, quoted in Burgess ed., *Interpretations of Federal Reserve Policy in the Speeches and Writings of Benjamin Strong*, Harper & Brothers, New York, 1930, pp. 68-138.

time when a country is striving for recovery from severe depression.

The Gold Problem.—The recent crisis may be said to have had its roots in gold; in fact the whole episode, in one of its aspects, was a demonstration that too much gold may be just as disastrous to a country as too little. Before the end of 1920 gold began flowing to the United States in a steady stream.

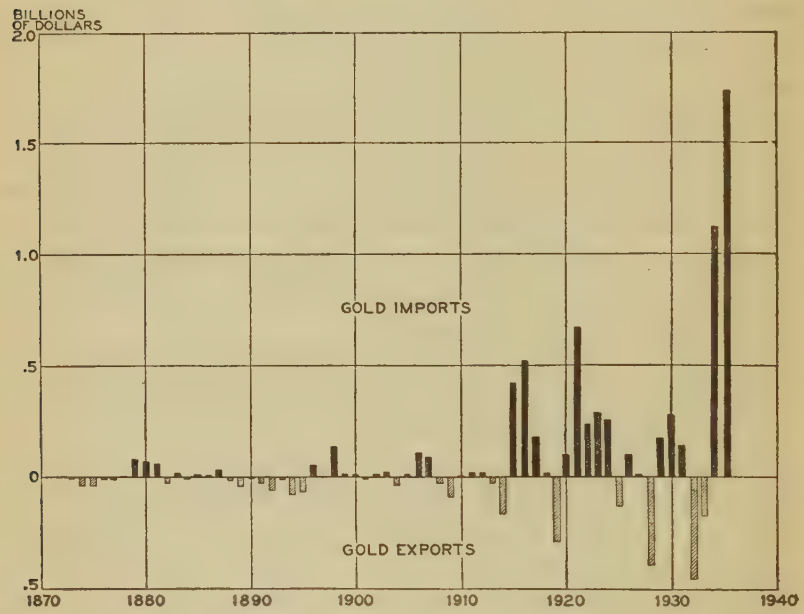


DIAGRAM 41—YEARLY NET IMPORTS AND EXPORTS OF GOLD SINCE 1873.

In the year 1921 net gold imports amounted to over $660,000,000, and from the middle of 1920 to the middle of 1927 totaled over $1,700,000,000, which was added to a gold stock already considerably expanded from 1915 to 1917. A comparison of this movement with previous experience is shown in Diagram 41. Every policy of the Reserve System during the period was forced to give consideration to gold movements.

As economists here and abroad saw this gold sweeping to our shores they freely predicted a price inflation in this country, and were greatly surprised at its nonappearance. Even much smaller movements had inevitably in the past found

their reflection in inflationary results of one sort or another. The belief in the dangers of this movement was shared by the Federal Reserve authorities, for in this country as elsewhere the link between gold and bank credit had always been close, and prices in turn had been related to the growth in credit. The historical relationships are shown in Diagram 42 for the

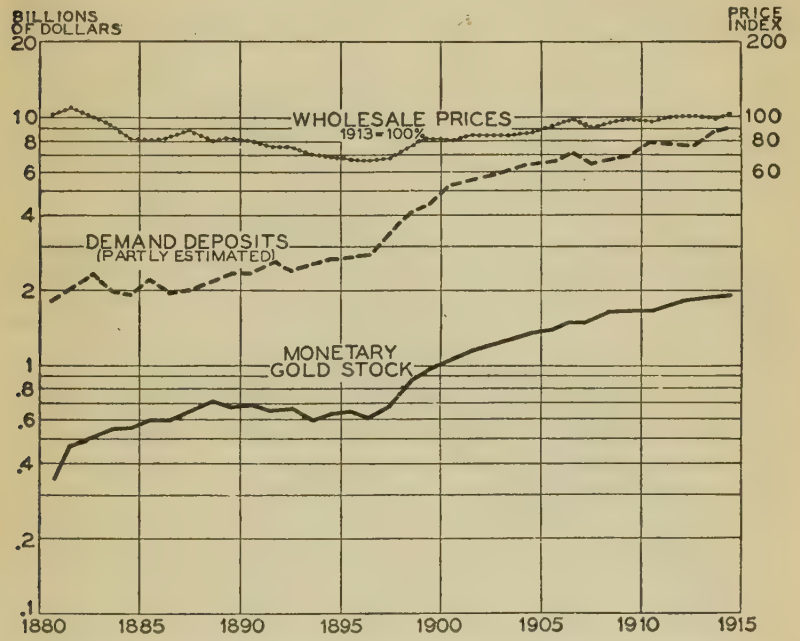


DIAGRAM 42—BEFORE THE ESTABLISHMENT OF THE FEDERAL RESERVE SYSTEM, BANK DEPOSITS RESTED DIRECTLY ON THE COUNTRY'S GOLD STOCK AND BOTH BANK DEPOSITS AND PRICES FELT THE IMPACT OF CHANGES IN THE GOLD STOCK.

United States. They parallel a like relationship in many other countries.

The relationships since 1914 between gold, credit, and prices are shown in Diagram 43. What was not generally realized, and what is clear from this diagram, was that the establishment of the Reserve System was making an important change in these relationships. From 1917 on there was less correspondence than formerly between the changes in the stock of gold in the country and the changes in bank deposits, although the country during the entire period remained on a

gold basis. The explanation of this economists' enigma is found in the use of Federal Reserve credit. In 1917, when war demands for credit and currency called for increases in bank reserves, the banks began to supplement their reserves by borrowing from the Federal Reserve Banks. The balances at the

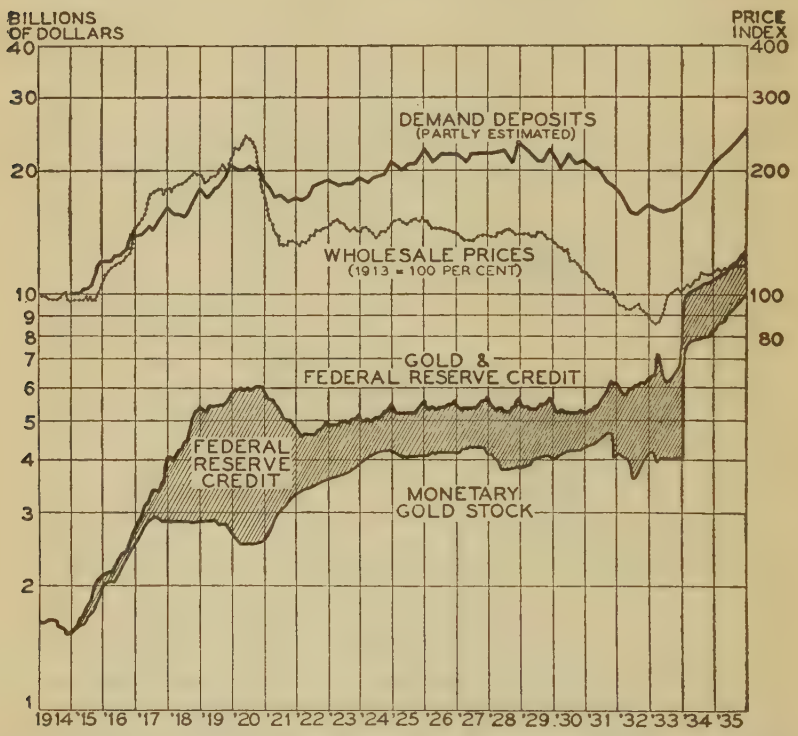


DIAGRAM 43—SINCE THE ESTABLISHMENT OF THE FEDERAL RESERVE SYSTEM, BANK DEPOSITS HAVE RESTED ON GOLD PLUS FEDERAL RESERVE CREDIT, AND A CUSHION OF FEDERAL RESERVE CREDIT HAS BROKEN THE IMPACT ON BANK DEPOSITS OF CHANGES IN THE GOLD STOCK. THE SHADED PART OF THE DIAGRAM REPRESENTS THE TOTAL AMOUNT OF CREDIT EXTENDED AT DIFFERENT TIMES BY THE RESERVE BANKS.

Reserve Banks which the member banks obtained by this borrowing could be counted as reserves, just the same as balances created by the deposit of gold. Thus, Federal Reserve loans supplemented the gold supply; and the country's bank deposits rested not on gold alone, but on gold plus Federal Reserve credit. As the war progressed banks borrowed still more

largely at the Reserve Banks, and the country's bank deposits rested still more largely upon Federal Reserve credit. The use of such credit as a supplement to gold was most extensive in the autumn of 1920, when over three billion dollars of Federal Reserve credit was being used as a kind of gold substitute.

Towards the end of 1920 the situation changed abruptly. Prices and business activity were moving to lower levels, and then deposits and currency in use began to decline. At the same time gold imports began in large volume. As bank loans were liquidated, and as currency returned from circulation, and gold flowed in from abroad, the member banks, always anxious to get out of debt, paid off their loans at the Reserve Banks. Thus the new gold was used to pay debts, not to create new ones; it was not made the basis for credit expansion.

In other words, during this period, from 1917 to the end of 1921, Federal Reserve credit acted as a kind of cushion between gold movements and bank deposits. It broke the impact of gold exports or imports upon bank credit. The power of the Reserve System to offset the influence of the gold imports which began during this crucial period depended upon the existence of a volume of Federal Reserve credit outstanding, which could be liquidated in an amount equal to gold imports. Thus the early part of the gold flow was robbed of its immediate inflationary qualities without much difficulty, because the member banks were heavily in debt to the Reserve System and they used the incoming gold to pay off their debts. But this process had definite limitations, and it was clear that sooner or later, when most of the banks ceased to be in debt, the old economic law would work and a continued gold flow would bring about inflationary results.

Dilemma of Credit Policy.—These abnormal gold movements resulted from the disorganization of world trade and finance. The gold flowed to this country largely because of the relative strength of the position of the United States in a disordered world. As a result of the war most of the other major powers had been driven off the gold standard. Germany was in the chaos of monetary inflation and its results. The reparations problem was unsettled. It was but natural that funds

should flow from all over the world to the United States, which had come through the war so little scathed, and which was experiencing a more prompt recovery than almost any other country. A continued—and destructive—gold flow to the United States could be stopped only by the reestablishment of economic and monetary stability throughout the world. It was because of these considerations that throughout this period the Reserve System followed with the greatest of interest developments in other countries, and its policies were in part directed towards assisting in world monetary stabilization.

In adjusting their policies to gold movements the Federal Reserve authorities faced a constant dilemma. There was always danger that the gold stored in the Reserve System and the gold constantly arriving might be used for a credit inflation. This was a situation calling for high discount rates, made effective by open-market operations. But there was also a constant threat of additional gold imports, particularly at times when money rates were firm, and money markets here attractive to international funds. Additional gold imports would not only increase the danger of inflation here, but would also draw gold from countries, often already suffering from shortage of funds, at times when world business recovery was hanging in the balance. This situation called for low discount rates and an easy money policy that more gold might not be attracted here. Credit policy had to thread its difficult way between these two opposite necessities—high enough rates to avoid inflation, and low enough rates to avoid attracting more gold—while at the same time it strove to adapt itself to changing credit situations here at home.

In this dilemma it may fairly be said that the Reserve System leaned towards the easy money side up to 1928, in the belief that low money rates in the United States would make it easier for the rest of the world to recover its equilibrium, would repel the gold we did not want, and would give business and agriculture in this country as easy money as was consistent with sound credit conditions. It was recognized that this policy ran the risk of encouraging inflationary tendencies, which it was hoped might be dealt with vigorously

as they arose. In these policies the Federal Reserve Bank of New York, as the bank in the nation's money center, often took the lead, but none was put into execution without consultation with and the approval of the Federal Reserve Board and a majority of the other Reserve Banks.

It may well be that if the easy money policy had been carried a little less far, later speculative excesses might have been less extreme and perhaps easier to control. The writer inclines towards that view. But the alternative to what happened can never be known. It may be that firmer rates would simply have attracted more gold and, while they might have postponed, might also have made more violent the explosion when it occurred.

Be that as it may, the policy of this period represented a bold attempt at monetary management by well-informed and conscientious men, acting after full deliberation, and dealing with a most perplexing situation. It was hoped also that the policies followed might facilitate a restoration of the gold standard throughout the world under which eventually less management would be necessary.

Restoration of the Gold Standard.—The financial disorder which brought so much gold was a disrupted world economy which found expression in unstable currencies. It was a situation in which trade was curtailed, prices were unstable, and international financial transactions were subject to disorganization and speculation.

In the process of economic rehabilitation each country must in large measure work out by itself its own cure for economic and currency disorders. It must, for example, balance its own governmental budget, collect its taxes, and devise a sound plan for the stabilization of its currency. Other countries can help only at the final step, when the plan is ready to be announced to the world. At that point, however, a large foreign credit has usually proved desirable as a kind of insurance, seldom put to actual use. When the United States resumed gold payments in 1879, John Sherman, then Secretary of the Treasury, secured by the sale of bonds a gold credit of $15,000,000 in London, ready to be used if necessary to assure the stability of

dollar exchange. In the decade of the twenties the United States had opportunities to perform a similar service for a number of other countries.

The Federal Reserve Act, in Section 14, gave the Federal Reserve Banks certain powers to deal with banks in foreign countries and to conduct certain banking operations abroad, with the approval of the Federal Reserve Board.

During the first ten years of the operations of the Reserve System, partly because of disturbed monetary conditions abroad, the transactions in the exercise of these powers were in relatively small volume. Mutual correspondent relationships were, however, established with the principal foreign banks of issue, and the business transacted with foreign banks gradually increased in size. Operations consisted largely of the maintenance of deposit accounts for foreign banks of issue and the investment of balances in these accounts in bankers' acceptances and government securities. The power to make loans secured by gold has also been exercised occasionally.

In these transactions with foreign banks of issue, negotiations and active management of the accounts were conducted by the New York Reserve Bank, since that bank is located in the country's central money market and at the point of contact with the money markets of foreign countries. The several Reserve Banks, however, have participated in the System's foreign operations, and the conduct of these operations has been under the supervision of the Federal Reserve Board. The Board has approved specifically every account opened and every credit granted.

The powers granted by the Federal Reserve Act, and the correspondent relationships which had been developed, placed the Federal Reserve System in a position to extend aid to foreign banks of issue in the reestablishment of the gold standard in Europe. The first important act of this sort was the extending by the Reserve System of a credit of $200,000,000 to the Bank of England in the spring of 1925, at the same time that private bankers arranged a $100,000,000 credit to the British Government. While the inauguration of the Dawes Plan, which included the stabilization of the German cur-

rency, was perhaps the first important step in the restoration of monetary stability in Europe, the return of England to the gold standard was a second, and perhaps even more important step, for England has occupied such a strategic position in world finance that her return to the gold standard carried with it large implications for the world as a whole. As a matter of fact, Holland, Australia, New Zealand, and the Dutch East Indies withdrew their embargo on gold exports simultaneously with Great Britain's action, and South Africa, Austria, and a number of other countries made somewhat similar announcements just preceding and following.

The specific arrangements made by the Federal Reserve Banks with the Bank of England and the conditions surrounding them were described in a section of the annual report of the Federal Reserve Board for 1925 quoted in appendix A. No use of this credit was made by the Bank of England, and it lapsed in May, 1927, but its existence undoubtedly added assurance as to the ability of England to return to the gold standard.

Other credits of somewhat similar character were arranged over a period of years with the banks of issue of Belgium, October 25, 1926; Poland, October 18, 1927; Italy, December 20, 1927; and Rumania, February 7, 1929. In most of these cases the Reserve Banks acted in association with a number of foreign banks of issue. These credits fulfilled their purpose without being used; but through them, as well as through its general credit policy, the Reserve System, without any actual advance of funds, was able to render essential aids towards the reestablishment of monetary order in the world.

The attempt at world financial reconstruction was almost successful. Germany returned to the gold standard in 1924; England in 1925; Belgium in 1926; Italy in 1927; France in 1928; and other countries adjusted their currencies correspondingly. After these steps it looked as though the mechanism were working again in fairly good order. But when the real strain developed in 1931 the mechanism broke down. There were some obvious reasons. France and Great Britain had stabilized their currencies in a relationship, to each other and

to other currencies, which it now seems was unbalanced. The pound was so high and the franc was so low that economic adjustment to those levels was slow and painful and only partially achieved.

There were other difficulties, partly political and partly economic. The reparations problem had never really been settled on a practicable basis. German payments had flowed forward in an apparently satisfactory stream under the Dawes and Young plans by the simple device of huge borrowings abroad for various public and private projects. As soon as these loans to Germany were discontinued, adequate funds ceased to be available for reparations. The war debts had never been settled, and there were still irritations from the Treaty of Versailles. Foreign loans were sold far too freely to enthusiastic citizens in the United States. A large volume of short-term funds was ready to shift rapidly from one world market to another in response to fears and hopes rather than economic causes. Even so, the machinery might have worked if it had not been subjected so soon to so great pressure; and for that pressure the United States was at least partly responsible.

1927-29 Expansion.—For a number of years after 1921 the United States appeared to be escaping the usual and expected consequences of the huge gold movements to this country. Apparently the textbooks were wrong! The economists of Europe found it difficult to understand; and ascribed the phenomenon to a policy of "sterilizing the gold." Most observers in the United States were reasonably pleased with the way the country had been able to escape gold inflation. In 1928 a two-volume report by an eminent commission expressed satisfaction over the condition of prosperity in the United States and ascribed it largely to high industrial efficiency.[6] The evidence which these volumes contain as to the progress in all forms of business in the years from 1922 to 1928 is impressive. Improvements in mechanical technique and in management were resulting in steadily improved products of many

[6] *Recent Economic Changes.* National Bureau of Economic Research, New York, 1929.

sorts at constant or declining prices. Wages both actual and in terms of purchasing power, and the total national income, had climbed steadily to new high figures. There were few signs

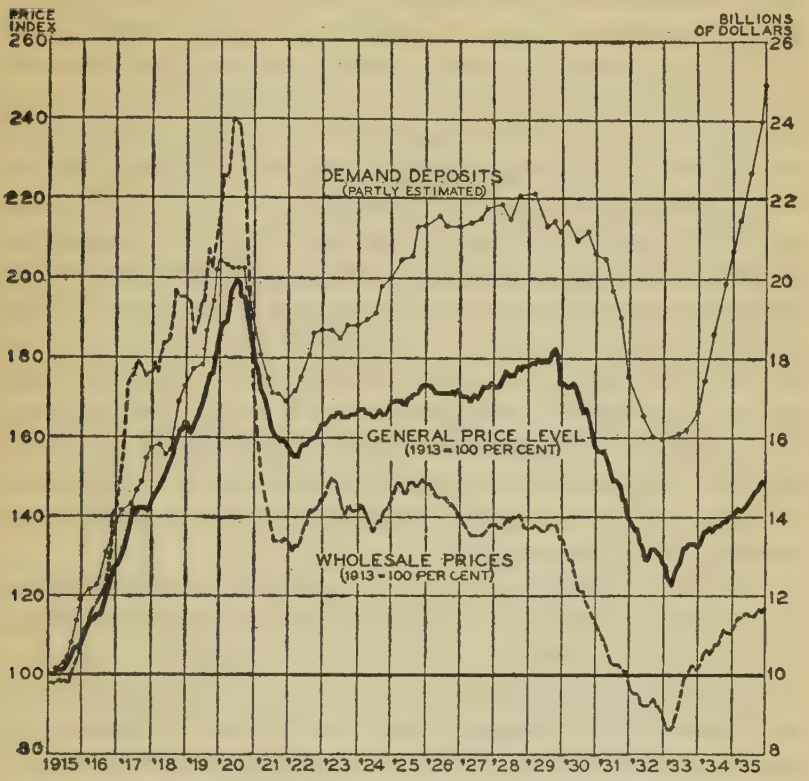


DIAGRAM 44—THE GENERAL PRICE LEVEL, A SAMPLING OF VARIOUS SORTS OF PRICES INCLUDING REAL ESTATE, WAGES, SECURITIES, WHOLESALE AND RETAIL PRICES, MOVED MORE CLOSELY WITH BANK CREDIT THAN DID WHOLESALE COMMODITY PRICES. (DEMAND DEPOSITS SMOOTHED WITH THREE PERIOD MOVING AVERAGES.)

of danger ahead outside of extraordinary developments in the security markets.

Looking back, it now seems clear that the very economic strength and rapidity of progress of the country was its undoing, for it was this strength which supported and seemed to justify a vast speculation in securities, in which a surprisingly large number of people participated, on borrowed money.

Outstanding securities were bid up to fantastic prices and large amounts of new issues were sold. It is now evident that this speculative orgy disturbed profoundly the country's economy. But just how, was not clear then and it is still a matter of debate among students of economics. Some believe the difficulty lay in excessive savings, used to increase plant capacity more rapidly than consumers' buying power for the product. Others describe the difficulties in terms of a huge over-expansion of credit, which gave an abnormal and temporary stimulus impossible to maintain. The expansion of bank credit was somewhat more rapid than might be considered normal, but as brokers' loans were largely financed by lenders other than banks the principal monetary abnormality appeared in the banking statistics as an exceptionally high velocity, or rate of turnover of money. Although commodity price averages did not rise, and in fact showed something of a declining tendency, prices of real estate, rents, labor, and securities climbed rapidly. The general price level, measured by a sampling of various sorts of such prices, showed considerable increase, as indicated in Diagram 44.

Inflation of a sort was here, but it came in such an insidious and unusual form that it was not fully recognized. This was so true that in 1928 and 1929 whenever restrictive Federal Reserve action was proposed the common response was that nothing should be done to injure business, which appeared to be in a sound position with small inventories and great efficiency of operation. There are even some economists today who in analysing the period find little in the events of 1928 and 1929 to suggest the need for vigorous Federal Reserve restraining action, and they make a plausible argument.[7] The only thing that clearly appeared to be wrong was over-activity and excessive speculation in the security and real estate markets; and there was a general failure to realize the extent to which this speculation had been accompanied by over-expan-

[7] See for example: Gustav Cassel, "Tardy Discount Policy" *Quarterly Report*, Skandinaviska Kreditaktiebolaget, July, 1930, p. 44; Lauchlin Currie, "The Failure of Monetary Policy to Prevent the Depression of 1929-32," *The Journal of Political Economy*, April, 1934, p. 168; R. G. Hawtrey, *The Art of Central Banking*, Longmans, Green, London, 1932, Chap. II.

sion and lack of economic balance in a number of specialized directions such as certain types of building construction, certain kinds of productive capacity, and many forms of public and private spending. The constantly high reserve ratio of the Reserve System, reflecting its huge stock of gold, prevented many from taking seriously the System's restrictive policies. Inflations of the past had usually been associated with excessive issues of paper money and inadequate gold reserves. It was hard to believe that we were experiencing genuine inflation with the vaults of our central banking system packed with gold and our reserve ratio abnormally high.

The System did nevertheless act with considerable energy. Sales of government securities were begun early in 1928 and continued until security holdings were about exhausted. The discount rate at New York was raised from 3½ to 5 per cent by three successive steps from January to July, 1928, and after a year was again raised in August, 1929 to 6 per cent. Early in 1929 the Reserve Board issued a warning against undue use of credit for speculation and the Reserve Banks placed pressure on individual member banks which appeared to be borrowing excessively.

Just as it is now easy to look back to the war-time period and draw the conclusion that the Federal Reserve System should have taken earlier and still more vigorous steps to restrain expansion, so a similar conclusion may readily be drawn concerning the period from 1927 to 1929. Just as in 1919 there had been a difference of opinion between the Reserve Banks and the Treasury as to discount rate policy, so early in 1929 there was a difference of opinion between the Reserve Banks and the Washington Board. The Federal Reserve Banks desired vigorous discount rate increases. The Federal Reserve Board was also concerned about the speculative situation but believed it could be dealt with through "direct action" and so avoid penalizing business with high rates. With this difference of view, fully effective action was not taken promptly enough.

The Great Depression.—While the depth of the depression which followed the gold boom may be ascribed in part to the

extent of the preceding boom, there were at least two complicating factors. The depression brought to light the weaknesses in the world financial mechanism. That mechanism broke down, and the chaotic position of the post-war years was reestablished. But more important still in its influence on business in this country, the banking system gave way under the strain, from weaknesses of long standing. The reasons have been discussed in earlier chapters. The results of these and other circumstances appeared in the extraordinary depth of the depression and its extraordinary duration.

The general direction of Federal Reserve policy during the depression was reasonably clear from the beginning. When the security markets broke in the autumn of 1929, the member banks were heavily in debt at the Reserve Banks, partly as a result of Federal Reserve policy. In addition the banks were called on to prevent a money stringency due to the withdrawal of loans from the market by lenders other than banks. The weight of a large bank debt was a wholesome restraint while the expansion was on, but, with the turn in events, it promptly became a source of pressure for liquidation. Accordingly the Reserve Banks began buying government securities immediately after the break in the security markets in the fall of 1929, and increased their holdings from time to time, as described in Chapter XV, until conditions of great monetary ease were established. In a few months member banks were largely out of debt, and money rates were easy and by the middle of 1931 banks in principal centers held considerable excess reserves. Bond yields were low and new financing was going forward in volume.

Hope of prompt recovery was blasted in the summer and fall of 1931 by the collapse of the credit structure in Central Europe. Credits to the central banks in a number of countries were extended by the Reserve System acting in cooperation with other banks of issue, but all in vain. The collapse in Europe was followed by such a drain from London of foreign funds on deposit there that England was forced to suspend gold payments. Immediately there began a withdrawal of foreign funds from New York. In a few weeks' time $725,-

000,000 of gold flowed out and the drain continued with interruptions until the last of the French balances were withdrawn in June, 1932. The total gold loss of the United States from September to June amounted to $1,100,000,000.

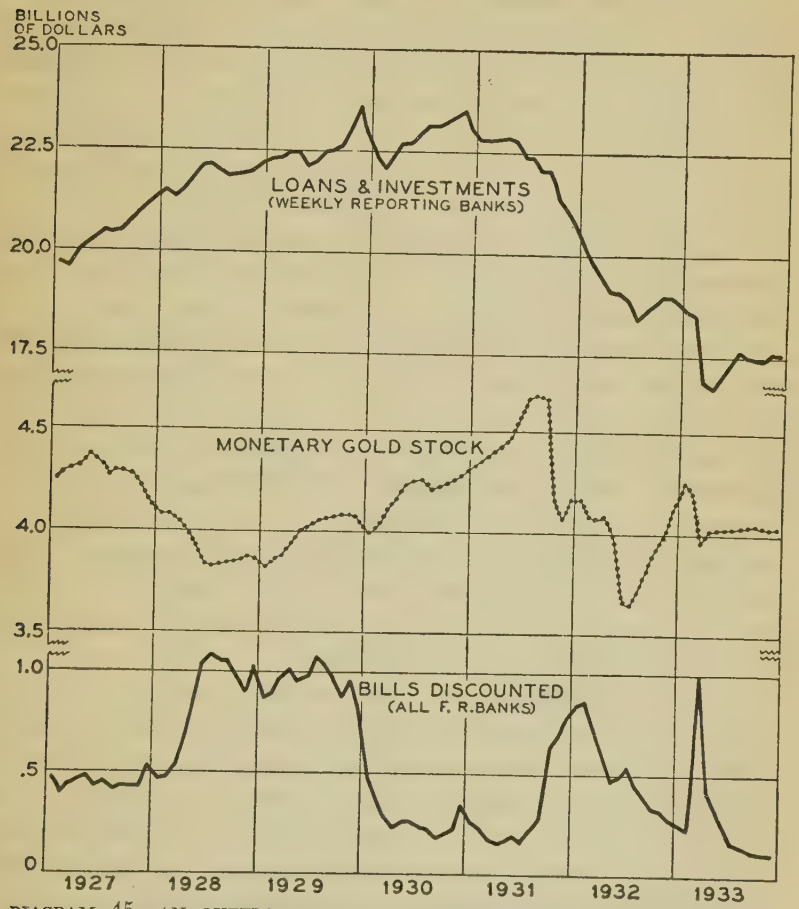


DIAGRAM 45—AN OUTFLOW OF GOLD IN THE LATTER PART OF 1931 AND EARLY 1932, RESULTED IN PUTTING THE MEMBER BANKS HEAVILY IN DEBT TO THE RESERVE BANKS, AND SEVERE LIQUIDATION OF BANK ASSETS.

This outflow of funds resulted in putting the member banks heavily in debt to the Reserve Banks, and hence placing great pressure for liquidation on the banking system. The deflation of credit in this period was very severe. The power of the Reserve System to relieve this indebtedness by the purchase of

government securities was limited by the collateral provisions for Federal Reserve notes, which left the Reserve Banks with little free gold not locked up behind Federal Reserve notes. Many member banks also were getting near the end of their borrowing power, because of their limited amounts of paper eligible for discount at the Reserve Banks. To replenish their cash, banks were therefore dumping their bonds on the market and putting pressure on their customers to make payment. A vicious circle of deflation was set in operation. Every act which the banks took to protect themselves and improve their cash position operated to depress values and force withdrawals of funds from banks and so again worsen their own positions. With 20,000 separate banks, each fighting for its own protection, no sane common policy was possible.

When the gold outflow first began in the autumn of 1931, the Reserve Banks purchased freely, at the then prevailing rate, all the bankers' acceptances member banks and the market cared to offer, and then followed traditional procedure at times of gold loss by raising the discount rate at New York by two steps from 1½ per cent to 3½ per cent. The rate was then held at that level until February 26, 1932, when it was again reduced to 3 per cent and then by stages to 1½ per cent, with a brief interruption of higher rates at the time of the "banking holiday" in March, 1933.

When the Congress convened in 1932 action was taken promptly in two directions, first, to enable banks to borrow freely the money they required, and secondly, to enable the Reserve System by the purchase of government securities to put banks in funds to reduce their debt, and so ease the money situation. The first of these ends was served by the creation of the Reconstruction Finance Corporation and by the Glass-Steagall Act, which permitted the Reserve Banks "in exceptional and exigent circumstances" to make loans on collateral not technically eligible. This Bill also covered the second point, as it permitted the Reserve Banks for a limited time to use government securities as collateral for Federal Reserve notes, a power which enabled the Reserve Banks to buy large amounts of government securities without running short of

collateral for Federal Reserve notes when member banks repaid their discounts.

With the passage of this legislation the Reserve System began at once a vigorous and extended program of buying government securities at a rate for a time of $100,000,000 a week, until a total of $1,000,000,000 had been acquired. The result was that member bank indebtedness was reduced by the end of June, 1932, to $440,000,000—the deflation of bank credit was checked. In the following months some increase in bank credit began.

Gold exports ceased late in June, as the last of the French balances were withdrawn in gold; and this country appeared to have weathered the storm that drove England off gold. Not only so, but the country's gold position remained strong with $2,578,000,000 of gold in the Reserve Banks in addition to $1,168,000,000 of gold in circulation in the form of gold certificates. Business made some recovery and it looked for a time as though the corner had been successfully turned.

The operation of cause and effect up to that point is fairly clear. The reasons for the later breakdown are less clear and are shrouded in the mists of political controversy. Some of the facts are, however, simple enough. First, the banking system after the terrific deflation of the preceding year was much weakened. The capital structures of many banks were impaired by the decline in values. Confidence in the banks was considerably shaken. In this situation the last "lame duck" Congress did not pass promptly budgetary and other necessary legislation and insisted on the publication of Reconstruction Finance Corporation loans to individual banks. There were of course other influences, but the key to the situation was the weakened condition of a badly constructed banking system which was well advertised during political controversies. During this period also the world monetary machinery remained disorganized.

Passing over the banking panic of February and March, 1933, which is a story by itself, the essentials of the financial recovery since March, 1933, may be summarized briefly. First, confidence has been restored in the banking system by the

reopening of banks believed to be sound, by the guaranty of deposits up to $5,000, and by the supplementing of bank capital by Reconstruction Finance Corporation purchases of preferred stock or bonds. In carrying through these programs an enormous amount of work has been done by the governmental agencies concerned and by the Reserve System, and directors and officers of individual banks, who have made large financial contributions as well.

Second, very easy money conditions have been established through the return of hoarded currency to the banks, further Federal Reserve purchases of government securities, and gold imports which followed devaluation of the dollar.

Third, the terrific deflation of bank credit in March, 1933, and previously has been in part replaced through government financing, but the restoration of private credit has barely begun.

Tentative Conclusions.—The foregoing account of the events of the past two decades seems to the writer to go far towards supporting the view that the two financial crises in the history of the Reserve System were in large measure directly and indirectly results of the World War. The war inflation, the post-war world currency disorganization, and the failure of the first efforts to rebuild the world financial mechanism largely because of economic and political aftermaths of the war, the huge gold movement to the United States and the resulting credit expansion, the breakdown of the banking system through structural weakness of long standing; all of these were beyond the power of any bank of issue wholly to prevent.

There have been repeated evidences during this period of the limitations on the power not only of the Federal Reserve System but of all banks of issue. Their influence is primarily upon the volume and price of the supply of reserve money, and secondarily on the soundness of banking conditions. Outside their scope are the thousand and one factors influencing the demand for money. In 1928 and 1929 the insatiable demand broke over all barriers. In 1934 and 1935 by contrast a huge supply of reserve money lay largely unused because of

lack of effective demand. The final result is determined fully as much by these enormous fluctuations in demand for money as by the supply, through which the bank of issue exercises what control it may have.

The economic historian may inquire whether a different Federal Reserve policy at certain times might perhaps have lessened the force of the blows which these crises struck at the economic life of this country. More rapid increases in discount rates in 1919 and in 1928 and 1929, and perhaps less of an easy money policy in 1927, would now appear to the writer to have been desirable. The increases in rate in the autumn of 1931 were perhaps open to question. But a close examination of these occasions, and of the divergent points of view held by the conscientious men who were participants in the formation of policies, illustrates more than all else the extreme difficulty of monetary management. The movements of business and finance never recur in exactly the same form. The gold boom was quite different from the war expansion. During that boom commodity prices were steady or falling; there was no evidence of accumulation of inventories of goods; industry did not appear to be over-expanded. Under such anomalous circumstances monetary control is as yet far from being an exact science.

Looking back there is some real basis for raising the question whether so elastic a monetary mechanism as the Federal Reserve System, which depends for its success on wise management, is better than some less elastic and more automatic arrangement. The experience of 21 years of the Reserve System is not conclusive either way. The experience of other countries is only moderately helpful. None of them has so elastic a system as ours. Few of them even relative to their size ever had so large a stock of gold to be controlled. They were almost always within sight of the point where movements of gold would dictate policy.

Here and there cases are cited as examples of successful monetary management: this country's record from 1922 to 1927, the recent Swedish experience, and British foreign exchange control in recent years. The French prewar experi-

ence might also be cited. For each of these something of a case can be made. Many instances may be recalled in which a bank of issue has dealt successfully with some crisis. The question as to monetary management upon which results are not yet conclusive is the question raised by the London *Economist*: whether under an elastic system, with vast supplies of credit available, expansion can be checked in time. In operating a bank of issue the easy and popular thing is usually the wrong thing to do. Easy money is always more popular than firm money. The real question is whether the bank of issue, necessarily having close relations with the government, which must give some regard to political considerations, and necessarily reflecting the temper of the period, will be able to put on the brakes in time in periods of expansion. But whether monetary management has been successfully demonstrated or not, it seems clear that this and other countries are committed to further experimentation, in that direction, partly because no very satisfactory alternative has presented itself. Recent experience has at least, both inside and outside the Reserve System, yielded a new sense of the nature of the problem and the responsibilities of the bank of issue.

Bearing on Future Problems.—The value of a review of the two crises under the Reserve System lies not only, or mainly, in its historical interest or in certain general philosophical conclusions but in its direct application to conditions today. The world is today suffering from practically the same disorder of economic and monetary instability as in the early twenties, and largely for that reason gold is again flowing to this country, and in amounts much larger than in the earlier period. The problem of those days has reappeared in magnified form. It is again twofold: how can the disorder that causes the gold flow be cured; and how can the gold be prevented from creating an over-expansion of credit here?

The only cure for the disorder that causes the gold flow is now, as it was then, the reestablishment of economic and monetary order in the world. The failure of the first effort in the twenties makes the second effort more difficult. This difficulty is further enhanced by a current philosophy of defeatism

with regard to the possibility of restoring an ordered international monetary system, a belief that somehow domestic stability and prosperity are in opposition to and inconsistent with international stability. Surely any such philosophy is ignorant of economic history and especially of the monetary history of the past two decades, for they showed the inevitable repercussions on this country of financial developments abroad. There is no means of assuring domestic order in a disordered world.

As to the second question, of how to deal with the gold now here and any future imports to prevent a second gold inflation, that is a problem likely to put to the full test all the ingenuity and wisdom of those who are responsible.

The parallels with previous experience are extraordinary. When the Reserve System first began operations the member banks held $800,000,000 of excess reserves. Today they hold $2,500,000,000. The rapid gold imports of 1934 and 1935 may be compared with the imports of 1920 to 1924 except that the recent movement was about twice as large, $3,000,000,000 compared with $1,500,000,000, and took place in half the time and was added to an already large gold stock just increased by $2,800,000,000 through the devaluation of the dollar, and gold additions are being supplemented by substantial amounts of silver. The country's gold stock was $1,600,000,000 in 1914, $4,000,000,000 in 1929, and $10,000,000,000 in early 1936.

There is a parallel with the war period in the sharing of responsibility for monetary policy between the Reserve System and the executive arm of the government. Today, through the operation of the $2,000,000,000 Stabilization Fund, the execution of silver policy, and the control of other funds, in addition to budgetary policy, the Treasury has powers of monetary management coordinate with those of the Reserve System. Only joint cooperative action can be effective.

Fortunately the Reserve System has been given by recent legislation a number of important powers of credit control. These include the power to influence security speculation through fixing margin requirements for loans on registered equity securities, the power to absorb substantial amounts of

excess funds by raising the reserve requirements of member banks up to twice present requirements, and a number of lesser but important supplementary powers designed to prevent abuses which were apparent in 1928 and 1929. In addition the Reserve System now holds $2,400,000,000 of government securities, the sale of which would have the effect of absorbing surplus funds. Other substantial new powers of control over specific economic fields are lodged in other governmental agencies.

Salvation does not of course lie in the multiplication of powers. It lies more largely in their wise use. Just as the two previous periods of credit expansion were quite different in their characteristics so it may be expected that any future period will depart from precedent. Already there are indications of certain sorts of unique problems. The number of unemployed is large; recovery in durable goods industries and especially building has lagged far behind the recovery in other directions. These two phases of our economic life require the stimulus of long continued easy money. But will such a period breed excesses in other directions before the laggards catch up? These and other questions will call for unprejudiced judgment and sound administration.

The problem is, however, not solely related to the supply of credit or to the control of abuses in the use of credit in the stock market or other particular directions. It involves changes in the demand for credit which arise as a composite result of all the nation's economic policies and activities—both governmental and private. Most important of all is the changing temper of the people and their capacity to learn from two decades of extraordinary experience.

SUMMARY

1. The fact that in the past two decades the United States has gone through two of the most severe credit crises in its history has led some to question whether the Reserve System is able to control over-expansion of credit.
2. The reduction in reserve requirements in the Federal Reserve Act created at the outset a predisposition for credit

expansion. To this was added an almost inevitable wartime inflation.

3. After the war a more prompt check on expansion was postponed because of Treasury financing.
4. In the decade of the twenties credit conditions and Federal Reserve policy were greatly influenced by gold imports of over 1,700 million dollars, which constituted a possible basis for inflation.
5. Federal Reserve policy faced a constant dilemma: high rates to discourage inflation attracted more gold; low rates to repel gold encouraged expansion.
6. During this period until 1928 the influence of the Reserve System somewhat favored easy money for the benefit of business and agriculture and to make it easier for the rest of the world to recover its equilibrium.
7. The only real cure for the gold inflow was the restoration of economic and monetary stability abroad. Stabilization programs were aided by credits in this country.
8. The attempt at world financial reconstruction almost succeeded but finally broke down under pressure.
9. Gold imports and other causes finally produced an inflation in the United States, finding its principal outlet in security speculation. Against this inflation Federal Reserve policies of restraint proved relatively ineffective.
10. The great depression was made more severe by the breakdown of the commercial banking system here and the breakdown of the world financial mechanism, and full recovery has been dependent on the restoration of both these mechanisms.
11. During the depression the Reserve System has exerted great pressure towards easy money and freely available credit, but again its efforts were relatively ineffective.
12. It seems probable that the two crises of the past 21 years were a direct and indirect result of the war and were beyond the power of the Reserve System wholly to prevent. The best the Reserve System could probably do was to lessen the force of the blows.
13. The whole experience emphasizes the limitations on the

power of any bank of issue in the face of major economic changes influencing the demand for credit.

14. Today the United States faces much the same dangers as in the early twenties. The gold inflow may again prove inflationary unless monetary stability is restored abroad with reasonable promptness and a coordinated, non-political, and sagacious credit policy is pursued here.

CHAPTER XVIII

Guides to Credit Policy

THE Federal Reserve Act has little to say about the objectives of policy. The preamble of the Act states that it is "An Act to provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes." Section 14 of the Act is a little more definite when it states that rates of discount "shall be fixed with a view of accommodating commerce and business."

There have been a number of attempts to put into the Federal Reserve Act a more definite statement of objectives, but the bills or sections of bills embodying them have, with two minor exceptions, failed of passage in the Congress, partly because a specific statement of purposes is always one of the most difficult kinds of statement on which to secure agreement.

The two exceptions were contained in the Banking Act of 1933. First, the simple statement of section 14 quoted above was carried over from the discount rate to open-market operations with one additional phrase, as follows:

> Sec. 12A (c) The time, character, and volume of all purchases and sales of paper described in section 14 of this Act as eligible for open-market operations shall be governed with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country.

This clause simply embodies word for word in the law the objectives of open-market policy adopted by the Federal Reserve System in 1923 when the present general plan of open-market organization was agreed upon.

Second, the phrase "the maintenance of sound credit conditions and the accommodation of commerce, industry, and agriculture" was added to that paragraph of section 4 of the

Act which describes the objectives to be considered in deciding what loans may be made to member banks.

At the time the Banking Act of 1935 was under consideration Governor Eccles of the Federal Reserve Board suggested the inclusion of a more general statement of objectives as follows:

> It shall be the duty of the Federal Reserve Board to exercise such powers as it possesses to promote conditions making for business stability and to mitigate by its influence unstabilizing fluctuations in the general level of production, trade, prices, and employment, so far as may be possible within the scope of monetary action.[1]

This suggestion was not incorporated in the Act as it was finally passed.

While there is much to be said for a more specific statement of objectives, the prime essential was perhaps contained in the brief sentence from section 14 of the original Act quoted above and regarded by the Reserve System as applicable to all its policy operations. This sentence might, of course, be interpreted narrowly as an injunction always to keep rates at the lowest possible point and so make the minimum direct charge upon business. But obviously such a policy in the long run would not accommodate business but ruin it. The only reasonable interpretation of the phrase is that policy is to be directed towards the general economic welfare of the country. That perhaps sets the objective for policy definitely enough, especially when interpreted in the light of later additions noted above. A more detailed statement almost unavoidably becomes involved in stating the means by which the prime purpose is to be realized. Such a statement is as likely to cause disagreement and discord as to be helpful. Now there is only the single question to be asked of any policy, will this policy in the long run help or hinder the national well-being?

The first Federal Reserve Board interpreted the limited instructions in the Federal Reserve Act in their broadest sense, as is indicated by the following quotation from their first

[1] U. S. House of Representatives, Committee on Banking and Currency, *Banking Act of 1935*, Hearings . . . 74th Congress, 1st Sess. H.R. 5357, Mar. 13, 1935, p. 251.

annual report at the close of 1914. Referring to the responsibilities of the Reserve System they say,

> . . . It should at all times be a steadying influence, leading when and where leadership is requisite, but never allowing itself to become an instrument for the promotion of the selfish interest of any private or sectional group, be their aims and methods open or disguised. It should never be lost to sight that the Reserve Banks are invested with much of the quality of a public trust. They were created because of the existence of certain common needs and interests, and they should be administered for the common welfare—for the good of all.
>
> . . . . . .
>
> There will be times when the great weight of their influence and resources should be exerted to secure a freer extension of credit and an easing of rates in order that the borrowing community shall be able to obtain accommodation at the lowest rates warranted by existing conditions and be adequately protected against exorbitant rates of interest. There will just as certainly, however, be other times when prudence and a proper regard for the common good will require that an opposite course should be pursued and accommodations curtailed. . . .

The Reserve System had little opportunity to apply these broad principles of credit control in practice for some years, for during the years between 1914 and 1917 the System had no power of credit control, since the member banks held excess reserves and were not dependent on the credit facilities of the System, and from 1917 through 1919 policy was of necessity dominated by war needs.

In 1920 Federal Reserve policy came out from under the domination of war necessities, and the accommodation of business again became the direct objective. In fact, for a decade after the crisis of 1920-21 the Reserve System was perhaps freer from external compulsions than any bank of issue had ever been before.

Customarily in the past central banking policy operated within the limitations imposed by gold reserves which were seldom large enough to be ignored in determining credit policy. The Federal Reserve System, however, soon found itself so largely supplied with gold reserves that the old standards

of central bank management as developed in other countries were largely inapplicable. In fact, the embarrassment of the Reserve System, as was noted in an earlier chapter, was to avoid the accumulation of too large gold reserves.

Under these circumstances the Federal Reserve System devoted much attention to the careful study and analysis of the problems of credit control. The Federal Reserve Board and the Federal Reserve Banks developed research departments for the collection and analysis of information on business and financial conditions. A reporting system was built up through which the Reserve System obtained first-hand information as to the production and distribution of goods, bank credit, prices, and various other aspects of the economic situation. A regular practice was developed of bringing to bear upon every question of policy a body of pertinent information and the analysis of the underlying principles. For example, the Open Market Committee had before it at each one of its meetings a memorandum on the credit situation. The Federal Reserve Board and the Federal Reserve Banks in their board meetings heard frequent reports from their economic staffs. In the Federal Reserve Bank of New York, by way of illustration, the practice was developed of preparing a special analytical report before any important policy decision.

These various steps in the development of credit policy did not result in the selection of any single simple index which might be employed as a guide to credit policy, but rather experience showed that every decision had to be made in the light of the whole business and credit situation. This general point of view is illustrated by the following quotation from the annual report of the Federal Reserve Board for the year 1923.

> The Federal reserve banks are the country's supplementary reservoir of credit and currency, the source to which the member banks turn when the demands of the business community have outrun their own unaided resources. The Federal reserve supplies the needed additions to credit in times of business expansion and takes up the slack in times of business recession. It is its responsibility to regulate the flow of new and additional credit from its reservoirs in accordance with solid indications of the economic needs of trade and

industry. When production, trade, and employment are in good volume and the credit resources of the commercial banks of the country are approximately all employed and there are signs neither of speculative business expansion nor of business reaction, Federal reserve bank rates should be neither so low as to invite the use of credit for speculative purposes nor so high as to discourage its use for meeting legitimate productive needs of the business community. It seems clear that if business is undergoing a rapid expansion and is in danger of developing an unhealthy or speculative boom, it should not be assisted by too easy credit conditions. In such circumstances the creation of additional credit by rediscounting at Federal reserve banks should be discouraged by increasing the cost of that credit—that is, by raising the discount rate. It seems equally obvious that if industry and trade are in process of recovery after a period of reaction, they should be given the support and encouragement of cheaper credit by the prompt establishment at the Federal reserve banks of rates that will invite the use of Federal reserve credit to facilitate business recovery. The reason for variable Federal reserve discount rates is the necessity of adjusting rates to these changes in business and credit conditions.[2]

The statement quoted above is in general terms. But specific decisions in any given situation require more definite guides. When can one know that an expansion of business is becoming too rapid and is in danger of developing an unhealthy or speculative boom? How can one know whether some decline in business is a prelude to a depression or is really an intermediate movement? What are the signs of sound credit conditions? In the experience of the Federal Reserve System over a period of years it has been found that some of the indexes of business and credit movements are more useful than others, and it seems desirable at this point to comment briefly on a number of these indexes.

Volume of Credit.—One of the best indications of whether the business and credit situations are wholesome or are likely to develop an unhealthy boom has been found in changes in the volume of bank credit as measured by deposits or loans and investments. Figures of this sort are available for the past sixty years and the record has shown that when the increase in credit has become much more rapid than the general rate of growth of the country's business, speculation, rising prices,

[2] Page 10.

and unwholesome tendencies have usually followed, and conversely a decline in credit or even stoppage of the rate of growth has been an indication of tendencies towards deflation and depression.

The research division of the Reports Department of the New York Reserve Bank has over a period of years made careful studies of these relationships with interesting, though not conclusive, results. The first step was to obtain measures of the growth tendencies in business and credit and measures also of changes in prices more inclusive than the commonly used index of wholesale prices. It was not possible to obtain measures for such broad and inclusive segments of economic life which would be absolutely precise, but it was believed that even rough measures of what the Reserve System needed to understand and deal with were more useful than even very precise measures of interesting but isolated aspects of the whole picture.

The results of these studies have been reported in a number of articles by Carl Snyder,[3] until recently chief statistician of the Bank. As an illustration Diagram 46 is reproduced from an address by Mr. Snyder before the Academy of Political Science on November 22, 1929, published in the proceedings, but has been brought up to date. It is plotted on a ratio—or semi-logarithmic scale; so that fluctuations in the lines show rates of change rather than absolute amounts.

The heavy line in the upper part of the diagram shows the changes over a period of years in the amount of bank credit in use, as measured by the total loans and investments of national banks to 1913 and thereafter of all commercial banks.[4] The straighter dashed line running through it is a measure of the rate of growth of production and trade in the United

[3] "New Measures of the Relations of Credit and Trade," *Proceedings* Academy of Political Science, January, 1930.

"On the Statistical Relation of Trade, Credit and Prices," *Revue de l'Institute International de Statistique*, 1934.

"The Problem of Monetary and Economic Stability," *The Quarterly Journal of Economics*, February, 1935.

[4] Other measures such as total deposits or demand deposits might have been used with varying theoretical support and with differing results, though the broad general relations would be somewhat similar.

States. The solid line in the lower part of the diagram labeled "Ratio of credit to trade" is derived from the two upper lines —it represents the volume of bank credit divided by the fig-

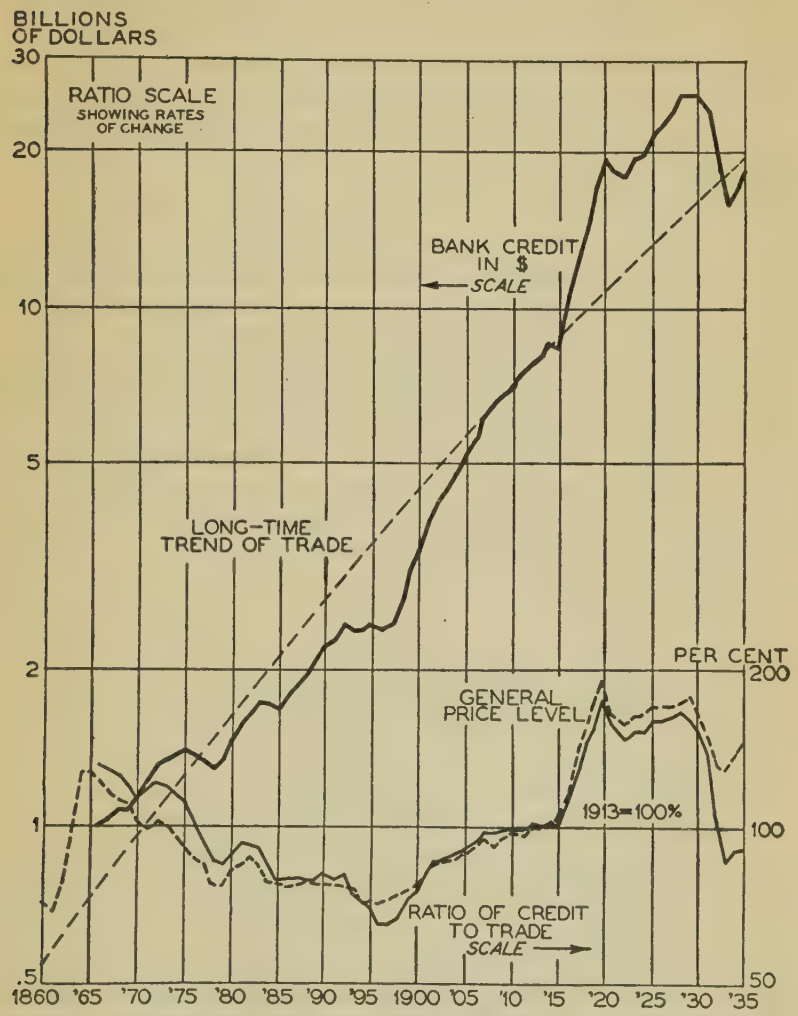


DIAGRAM 46—LONG-TIME RELATIONS OF TRADE, CREDIT, AND PRICE LEVELS IN THE UNITED STATES.

ures for the long-time trend of trade. This line conforms fairly closely with the dashed line representing the general price level. The conclusion Mr. Snyder draws is that when credit

moves faster than the general trend of trade, prices rise; and conversely when credit moves more slowly, prices decline. The suggestion of these findings is that for the maintenance of a reasonably stable price level the volume of credit should increase in general at a steady rate consistent with the growth of business. Mr. Snyder found that usually minor fluctuations in business volume are largely taken care of by changes in the velocity or rate of turnover of demand deposits rather than changes in the volume of credit.[5]

Mr. Snyder's conclusions may be quoted as follows:

> Now, we have in these computations pretty clear evidence that credit expansion must go on at least as rapidly as the growth of trade; that is, at about four per cent per year. Otherwise, there seems a definite check to trade and to prosperity.
>
> But we seem likewise to have clear evidence that there is a sharp limitation to the beneficial effects of credit expansion, and precisely as we should expect to find it, viz., that whenever prosperity has reached the practical working *maximum of employment* for any given period, further credit expansion can only bring about undue speculative activity, and even mania, rising prices, and all the familiar ills attendant upon inflation or monetary depreciation. The gambler and the speculator thrive at the expense of the rest of the community.

These measures, like all such measures, are not an infallible guide. They failed to give a complete picture in 1929. At that time business expansion and a speculative boom were largely financed, not by an unusual increase in the volume of bank credit but by an extraordinary increase in the velocity of bank credit which carried velocity for 101 clearing house centers for the month of October to a rate of about 94 times a year compared with an average rate of about 50 for the years from 1922 to 1927. This high velocity was related to an unprecedented amount of lending on the Stock Exchange by lenders other than banks. Thus the figures for the volume of bank credit alone did not adequately reflect the real economic position. This experience like many others was a demonstration of the inadequacy of any single guide to credit policy no matter how convincing it may have been in the test of past years.

[5] *Proceedings,* ibid. See also Burgess, "Velocity of Bank Deposits," *Journal of the American Statistical Association,* June, 1923.

Moreover guides of any sort may not wisely be followed in an automatic way. For example in the past two years, 1934 and 1935, the rate of growth in bank deposits has been more rapid than the growth of either the long-time trend of business or the actual recovery movement from the depression. But that does not seem a sound reason for attempting as yet to check the growth of credit. For the country has been engaged in recovering lost ground. The credit wiped out by years of deflation has not yet been fully restored. The restoration of the credit volume to something like the predepression level, to which the country had in two decades become pretty well adjusted, might be expected to exert pressure towards increased business activity and reemployment.

The greatest problem in credit control is the problem of timing. The real difficulty is that credit conditions today may determine the business conditions two years from now, or even longer. The most variable factors in business are innovations, new plant construction, new machinery, home building. These projects have to be planned months ahead of the time when they employ labor and consume materials. The planning and initiation of such projects are only undertaken in volume when conditions are favorable, when labor is available, when raw materials are reasonably cheap, when money is available at low rates, when there are reasonable prospects of economic stability and of profit from the enterprise. Credit is important in this picture primarily through its effect on the price and availability of long-term money, that is through its effect on the security markets and the mortgage market; and there is often a considerable time lag between credit changes and changes in the long-term market. For these reasons the credit conditions of today react upon the business conditions of next year and the year following. Many discussions focus attention on the wrong point when they deal with short-term business borrowing from banks. That appears on the evidence to be the less important part of the credit cycle and to move relatively late. Applying these considerations by way of illustration to the situation early in 1936, the easy credit conditions of the past two years have only recently begun to operate

towards making long-term funds available at low rates for capital goods and for building, the fields in which the largest number of workers continue unemployed.

It should also be noted that the indefinite continuance of the present very easy credit conditions would be likely at some time to begin to breed over-activity in the security markets, or other excesses which if unchecked would bring on business over-expansion in one direction or another and lack of balance in the country's economy. Credit conditions will need to be reversed not after, but long before their final consequences have appeared in business. In determining the best time for a reversal in Federal Reserve policy the changes in the volume of credit viewed in this comprehensive way are likely to prove one of the best guides.

2 **The Quality of Credit.**—Second in importance to changes in the volume of credit as a guide to credit policy should probably be listed information as to the way credit is being used. In 1928 and 1929, for example, the extent to which credit was being used in security operations was an indication of an unwholesome credit situation. Similarly in 1920 the extent of credit use in carrying commodities and inventories was occasion for concern. Changes in the quality of credit are perhaps harder to interpret than changes in volume; each new situation brings changes in the nature of credit use which are not easy to appraise until after any movement has reached its climax, and then it may be too late. Was the large use of credit in 1928 and 1929 to carry securities justified by changes in value of securities due to changed economic conditions—the new era argument? The answer was only obvious after the crash.

The interpretation of changes in the use of credit is not simple. But departures from the traditional pattern need to be carefully watched and the burden of proof rests upon the innovation. The reports the Reserve System receives from member banks are itemized to show in broad categories the changes in different kinds of credit. The examinations of member banks in which the Reserve Banks usually participate, and the reports of which they always receive, reflect in more detail

the changes from time to time in the nature of member bank loans and investments. All of these help to reveal in the early stages changes in credit conditions which may later lead to difficulty. Under conditions early in 1936, for example, it is pertinent to ask frequently the question whether very easy money and large excess reserves may be leading banks to make loans and investments which may later prove unsound or subject to depreciation.

Condition of Business.—Again much is to be learned from a study of business conditions themselves. When business is booming and employment is full there is no advantage in making credit easy to obtain. On the contrary that is frequently a time of danger when credit should be relatively high in price and there should be caution in its use.[6] At such a time, when employment is full and business is operating near capacity, further increases in credit are more apt to lead to increases in prices than to increased production. On the other hand when business is in the doldrums, and employment is slack, the price of credit may well be kept relatively cheap. On general principles a bank of issue should throw its influence towards firm money conditions in time of prosperity and towards easy money at times of depression. To aid in judging the difficult timing of such a policy the Reserve System has found it desirable to devise as accurate measures as possible of the changes in business. A comprehensive index of industrial production is carried forward currently by the Board of Governors together with indexes of retail trade, wholesale trade, transportation, etc. The way in which Federal Reserve open-market and discount policies were related to the fluctuations of industrial production was illustrated in Diagram 37 on page 249 in the chapter on open-market operations.

Prices.—One of the most bitterly disputed questions of modern monetary theory concerns the extent to which prices may be used as a guide to central bank policy. All will acknowledge that prices are an important guide, but some few insist with a religious and almost fanatical zeal that they

[6] See quotation from *Annual Report* of the Federal Reserve Board, cited p. 298.

should be the only guide. In 1926 and 1928 a bill was introduced into Congress requiring the Federal Reserve System to use all its powers towards the stabilization of commodity prices.[7]

Admittedly prices are one of the most sensitive indexes of the condition of business and of the relation of credit to business, and the Reserve System has given a vast amount of study to the movement of different kinds of prices. The research division of the Board for many years computed a weekly index of prices before one was available from other sources. The studies carried forward by the research staff of the New York Reserve Bank in computing an index of the general price level have already been mentioned.

These various studies have shown first that wholesale commodity prices are frequently not an accurate measure of the general price level. The relation between the two is shown in Diagram 47.

Secondly, they have shown that prices, like any other single aspect of the economic situation, are not satisfactory as the only guide to policy.

This is not the place for a full discussion of the question. The reader can, however, satisfy himself on the question in some measure by an inspection of Diagram 47. It will be noted that if wholesale prices had been used as the sole guide to credit policy during the decade of the twenties a generally easy monetary policy would have been followed through 1928 and 1929 when the speculative boom was at its height. The general price level was a better guide, though even that failed to register truly the extent of over-expansion.

Prices are a useful index for the bank of issue because they are so sensitive: when more credit is available than business can use profitably, credit tends to find its way into increases in prices; it may be prices of commodities, or wages, securities, or real estate. Similarly a scarcity of credit may lead to declining prices of one kind or another. But price changes are

[7] See Hearings Before the House Committee on Banking & Currency, 1926 and 1928, on "Stabilization," especially testimony of Benjamin Strong, quoted in Burgess, Ed. *Interpretations of Federal Reserve Policy*, Harper & Brothers, 1930, pp. 224, 317.

subject to so many other influences than domestic credit conditions that they cannot be wholly trusted as guides to policy. They are affected very largely, for example, by international conditions. Frequently the evidence of different kinds of prices is contradictory—one kind of price goes up and another down. What weight should be assigned to each? In 1925 and 1926 and again in 1928 and 1929 commodity prices declined while

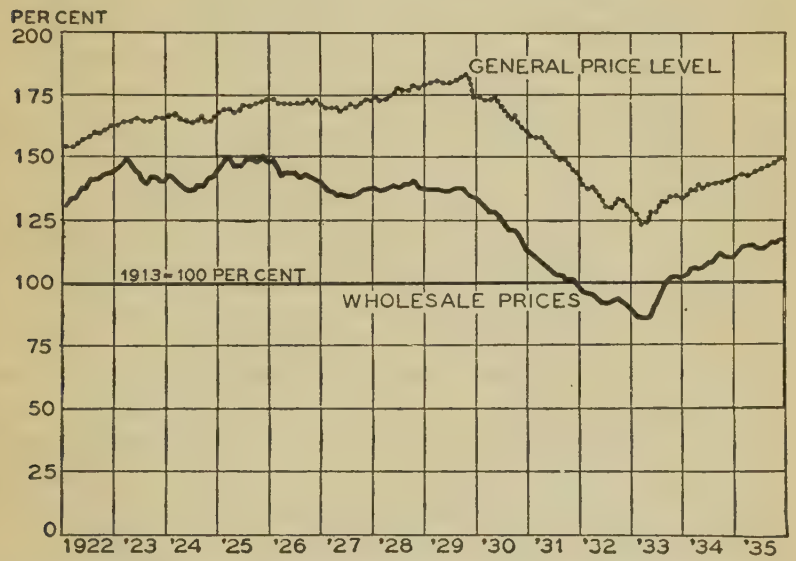


DIAGRAM 47—WHILE THE GENERAL PRICE LEVEL AND WHOLESALE PRICES USUALLY MOVE TOGETHER, THEY HAVE DIVERGED AT A NUMBER OF CRITICAL TIMES, ESPECIALLY IN THE LATE TWENTIES.

security prices and wages rose. Some price increases are desirable as long-term trends, real wages for example; some decreases are desirable in prices of finished goods, as invention and management cheapen costs. Prices in general are a composite result of a multiplicity of economic movements, useful as a guide but not infallible.

Gold Movements and International Conditions.—The way in which bank of issue policy may be greatly affected by gold movements and developments outside the United States is illustrated by the discussion in the preceding chapter. The United States in recent years has been less influenced by these

considerations than this country was in the past or than are most other countries of the world today. Before the establishment of the Federal Reserve System and especially in earlier years the money markets of this country were largely dependent on London. London was in fact the world's central money market, the bookkeeper for much of the world's trade. London did not need very much gold because other countries kept balances in London, and settlements between countries took place by shifts between these balances in London in much the same way that settlements between different parts of this country are now made on the books of the inter-district settlement fund in Washington. This situation is now quite altered and there is no longer a single center for settlements.

There are now several important centers, including New York, in which the world's banking balances are maintained. As a result the making of international settlements has become much more complicated. It is no longer a bookkeeping operation in a single center, but involves a much heavier transfer of funds between centers, especially at times when for one reason or another the holders of balances want to transfer them from one center to another. Such transfers often require large gold movements. As one of these world money centers New York now feels the effect of every important world monetary movement and has in turn a great responsibility; for developments here now have, as never before, their reactions in many parts of the world. Hence Federal Reserve policy cannot be viewed as solely domestic. It must consider the probable effects on this country of international events, and the effects on other countries, and, on the rebound, upon the United States again of actions taken here.

Conclusion.—The listing of the foregoing guides to policy must leave the reader with a sense of complexity and confusion. It would be so much simpler to set up some mechanical guide that could be followed, such as commodity prices or the reserve ratio or the volume of credit. There are many who look forward to the day when the world will return to the operation of the gold standard with the hope that then policy can be a more automatic response to movements of gold and changes in money rates. There is something to be said for this

point of view, but even with the mechanism as perfect as possible it is safe to say that much must be left to judgment. Clearly a bank of issue should have at its command every possible mechanical aid, and should keep open every avenue for information, but the best information will not be a substitute for judgment.

Some penetrating observations on this subject were made by Professor Allyn A. Young, late of Harvard and the University of London. The following paragraphs are quoted from an article of his in the Times *Annalist* for May 6, 1927:

Only since the war, however, have central banks come to realize how much depends upon the right use of their powers and how difficult it is to know just how and when to use them. Americans have ground for pride in the fact that the banks of the Federal Reserve System, with the cooperation of the Federal Reserve Board, have gone further in the careful study and analysis of these difficult problems than the central banks of any other country. European banks have found that they can learn something, not from our Federal Reserve act, but from the way in which our Federal Reserve banks are operated.

This does not mean, however, that anybody knows all that needs to be known about these matters. No one really knows very much about the deeper reaching, as distinguished from the merely surface effects of open market operations and changes of discount rates. Nobody knows just how much or how little the operations of the Federal Reserve banks have contributed to the general stability of industry in recent years. Nobody knows what the surest symptoms are of an approaching expansion or recession of business activity. No one is in a position to say with any assurance just what the specific criteria are which should guide the policies of the Federal Reserve System.

Policy by Rules Dangerous

In fact, we can be certain that reliance upon any simple rule or set of rules would be dangerous. Economic situations are never twice alike. They are compounded of different elements—foreign and domestic, agricultural and industrial, monetary and non-monetary, psychological and physical—and these various elements are combined in constantly shifting proportions.

"Scientific" analysis, unaided, can never carry the inquirer to the heart of an economic situation. Judgment and wisdom—the power to take a complex set of considerations into account and come to a balanced view of them—are quite as much needed as

facts and theories. The Federal Reserve banks need to operate in the light of all the information they can get, and they need to have this information organized and analyzed in such a way as to give the maximum amount of illumination. But they also need the guidance of that practical wisdom which is born only of experience. What the Federal Reserve banks need most, therefore, is not more power or less power, or doctrinaire formulations of what their policy ought to be, but merely an opportunity to develop a sound tradition, and to establish it firmly.

SUMMARY

1. With respect to objectives the Federal Reserve Act says only that rates of discount "shall be fixed with a view of accommodating commerce and business," and sets the same objective for open-market policy with the additional phrase, "and with regard to their bearing upon the general credit situation of the country." "The maintenance of sound credit conditions" is also cited as an objective in making loans.
2. The Reserve System has always interpreted this objective in broad terms as the welfare of business—in the long run.
3. Federal Reserve policy had little effectiveness or independent power until after the war. Since about 1920 it has had unusual freedom of action, though latterly its responsibilities have been shared with other agencies of government.
4. The Reserve System has devoted much attention to the careful study and analysis of the problems of credit control.
5. No simple single guide to credit policy has been found satisfactory.
6. The most useful guides to policy have been shown by experience to be:
   a. Changes in the volume of credit.
   b. Changes in the way credit is being used.
   c. Condition of business.
   d. Prices.
   e. Gold movements and international conditions.
7. In the last analysis wise policy decisions depend on the judgment of the managers of the System, on their detachment from political or commercial pressure without isolation from realities. and their freedom to develop a sound tradition.

CHAPTER XIX

Meaning of the Federal Reserve Statement

THE Federal Reserve System publishes each week one of the most complete statements of its operations of any bank of issue in the world. The statement includes thirty-seven items and is published in combined form for the Reserve System, and separately as well for each of the twelve Federal Reserve Banks. This statement appears in the daily papers every Friday morning, giving the condition as of the close of business on Wednesday night. A copy of the one published for March 25, 1936, is shown on pages 312 and 313.

Changes in the statement of the Federal Reserve Banks reflect directly in summary a considerable part of the banking operations of the United States, for Federal Reserve membership includes 85 per cent of the country's commercial banking deposits, and they reflect indirectly the operations of the nonmember banks as well. These Federal Reserve reports provide a kind of epitome of the nation's banking conditions. Since the condition of the banks in turn reflects certain phases of the nation's business, the weekly statements of the Reserve Banks should give the acute observer over a period of weeks some index of business conditions.

The statements are available more promptly than any other index of such wide scope and afford an understanding of conditions which are current and not several weeks past. But the statement with its thirty-seven items is a rather complicated affair and its full significance is understood by relatively few people. One has to be something of an expert to understand the meaning of the changes from week to week in all of the items.

Fortunately the Reserve Board for the past five or six years has been giving out with the weekly press statement a summary statement of twelve items, which not only gives separately the most important items from the full statement but

TABLE 25.—ASSETS AND LIABILITIES OF THE TWELVE FEDERAL RESERVE BANKS COMBINED

(In thousands of dollars)

ASSETS	Mar. 25, 1936	Mar. 18, 1936	Mar. 27, 1935
Gold certificates on hand and due from U. S. Treasury	7,665,840	7,667,338	5,567,025
Redemption fund—F. R. notes	14,873	15,019	14,708
Other cash	353,632	346,078	253,500
Total reserves	8,034,345	8,028,435	5,835,233
Bills discounted:			
Secured by U. S. Gov't obligations, direct and / or fully guaranteed	3,338	2,857	4,415
Other bills discounted	2,727	2,773	3,263
Total bills discounted	6,065	5,630	7,678
Bills bought in open market	4,674	4,679	5,306
Industrial advances	30,501	30,321	20,785
U. S. Government securities:			
Bonds	265,711	265,756	391,942
Treasury notes	1,554,893	1,554,896	1,494,703
Treasury bills	609,667	609,667	543,660
Total U. S. Government securities	2,430,271	2,430,319	2,430,305
Other securities	181	181	.....
Total bills and securities	2,471,692	2,471,130	2,464,074
Due from foreign banks	650	644	702
F. R. notes of other banks	19,311	17,670	15,973
Uncollected items	527,356	636,336	446,072
Bank premises	47,865	47,864	49,524
All other assets	35,973	35,549	42,173
TOTAL ASSETS	11,137,192	11,237,628	8,853,751

TABLE 25.—*Continued*

LIABILITIES	Mar. 25, 1936	Mar. 18, 1936	Mar. 27, 1935
F. R. notes in actual circulation	3,732,333	3,730,979	3,130,572
Deposits:			
Member bank—reserve account	5,059,147	5,143,768	4,285,129
U.S. Treasurer—General account	1,146,565	1,067,364	393,138
Foreign bank	64,576	66,016	20,053
Other deposits	275,801	261,980	220,746
Total deposits	6,546,089	6,539,128	4,919,066
Deferred availability items	514,646	622,988	458,986
Capital paid in	130,724	130,741	146,921
Surplus (Section 7)	145,501	145,501	144,893
Surplus (Section 13 b)	26,513	26,513	14,366
Reserve for contingencies	34,105	34,100	30,802
All other liabilities	7,281	7,678	8,145
TOTAL LIABILITIES	11,137,192	11,237,628	8,853,751
Ratio of total reserves to deposit and F. R. note liabilities combined	78.2%	78.2%	72.5%
Contingent liability on bills purchased for foreign correspondents	.....	.....	98
Commitments to make industrial advances	25,421	25,537	15,732

gives a number of figures from other sources—especially monetary gold stock and money in circulation—which are of vast help in interpreting the Federal Reserve figures. The significance of this statement will perhaps appear most readily from a comparison of the figures for two contrasting dates, March 25, 1936, and March 27, 1929.

This kind of summary statement was born of the attempt to make for the whole country the sort of analysis which is reported for the New York money market in Chapter XI—an

TABLE 26.—RESERVE BANK CREDIT OUTSTANDING AND RELATED ITEMS

(In millions of dollars)

	Mar. 25, 1936	Mar. 27, 1929
Bills discounted	6	1,024
Bills bought	5	208
U. S. Government securities	2,430	170
Industrial advances (not including 25 million commitments — March 25)	31	.....
Other Reserve Bank credit	14	27
TOTAL RESERVE BANK CREDIT	2,485	1,429
Monetary gold stock	10,177	3,887
Treasury and national bank currency	2,502	2,012
Money in circulation	5,837	4,380
Member bank reserve balances	5,059	2,332
Treasury cash and deposits with F. R. banks	3,667	225
Nonmember deposits and other F. R. accounts	601	391

analysis of gains and losses of funds or, to put it another way, the supply and use of member bank reserve funds. The statement attempts to answer two questions: how much reserve money (that is the "high-powered" money of Chapter I) became available during the week; and how was it put to work or otherwise disposed of? The statement is balanced: the amount of funds supplied is exactly accounted for on the other side of the statement showing how funds have been used. Thus it applies accounting procedure to this field which was long an area of guesswork and generalities.

An article in the *Federal Reserve Bulletin* for July, 1935, reviewed in some detail the derivation and significance of the various items in this statement, and is available in the form of a separate reprint. In view of the completeness of this article there is no occasion here to repeat a full description of the different items in the statement. It seems rather desirable to comment on the meaning of a few of the more important

items, using by way of illustration the figures shown above for the two dates in 1929 and 1936.

These two dates offer an unusual contrast both as to prevailing economic conditions and as to the position of the Reserve System. The spring of 1929 was at the apex of business prosperity and speculative boom; money was tight and money rates were high. In the spring of 1936 business was well started in recovery from depression but still considerably below normal; money was extremely easy, and money rates both long and short were lower than ever before in the history of the country.

Bills Discounted.—The first item of the statement reveals at once certain differences between the two periods. "Bills discounted" represents the amount which member banks are borrowing directly at the Federal Reserve Banks. It is the amount of Federal Reserve credit in use for which the member banks feel direct responsibility. The importance of this item was discussed in Chapter IX, where it was pointed out that the money market is very sensitive to changes in it. In fact from this point of view it is the most significant item in the whole Federal Reserve statement. For when the member banks are heavily in debt at the Reserve Banks they are constantly striving to get out of debt; they are calling loans, selling investments, and are a bit cautious in their lending. Conversely, when the member banks owe little to the Reserve Banks they lend more freely and money tends to be easier. There is, therefore, a close correlation between money rates and total borrowings of member banks at the Federal Reserve Banks, represented in the statement by "Bills discounted." Therefore this item is a good index of the condition of the money market. Its increases are prophetic of rising interest rates, and decreases are prophetic of falling interest rates.

The billion dollars which the member banks owed the Reserve Banks in March, 1929, exercised a substantial amount of pressure on the banking system, for the banks were constantly trying to get out of debt. High money rates were a natural result. In March, 1936, the position was reversed: the banks were almost completely out of debt, and in fact, as

noted earlier, "Member bank reserve balances" held huge amounts of excess reserves. The exceptionally low money rates were a logical result of these conditions.

The item "Bills discounted" was in ordinary times perhaps the best index, aside from money rates, of basic money conditions; for it showed the position of the banks, the extent to which they were dependent on the Reserve Banks. Under conditions as this is written, when the banks not only are out of debt but hold large excess reserves, the picture is not complete without considering also their holdings of excess reserves. The Board of Governors has recently added to the weekly statement a memorandum item giving the amount of excess reserves. The two items taken together are the nearest present substitute for the pre-Federal Reserve statement of reserves of the New York City banks, issued each Saturday by the Clearing House, showing the amounts of reserves the Clearing House banks were required to keep to satisfy the percentages prescribed by law, and showing actual reserves in relation to these requirements. The most significant figure was that for "excess reserves" beyond requirements, or in rare instances the deficit below requirements. Excess reserves represented the banks' unused lending power, the margin of possible expansion and of safety. They were the point where the relation between supply and demand could be measured. When demand for funds increased relative to the supply, excess reserves declined. When demand decreased relative to supply, excess reserves rose. Since in those days New York was, even more than at present, the storage place for the country's reserve funds, the reserve position of the New York banks was an index of the national money situation.

In the old days prudent bankers, and business men as well, followed closely the statement for excess reserves of the New York banks. A decrease in excess reserves was one of the surest signs of a storm ahead. In the summer of 1907, for example, a decrease in excess reserves from $8,700,000 in August to an actual deficit preceded the panic which broke in October. The very close relationship between the reserve position of the

New York banks and interest rates was shown in Diagram 16 on page 149.

Since the Federal Reserve System has been in operation the figure for excess reserves of the New York City banks has lost much of its old significance, and its publication by the Clearing House was discontinued in 1928. The reason was that the banks no longer carried (except in very unusual circumstances) any excess reserves, but simply the legally required minimum, relying upon the Reserve Banks to help them out in any emergency. Thus, in normal times, for week after week, in prosperity or depression, when interest rates were high or low, the excess average reserves of the Clearing House banks appeared in the Saturday statement at a figure just above the legally prescribed amounts. The statement had lost its old significance.

The fluctuating element became the total amount of credit advanced by the Reserve Banks. When the demand for funds was large the banks borrowed more from the Reserve Banks or sold them acceptances, and when the demand decreased, this borrowing was reduced or the acceptances ran off. Or in lieu of these operations the Reserve Banks might shift their holdings of government securities. But the money market was most influenced by the direct borrowing from the Reserve Banks, "Bills discounted," for the banks felt the direct responsibility for this borrowing.

Thus as the usefulness of the New York Clearing House statement diminished as an index of the money situation, a substitute appeared in the Federal Reserve statement. Just as the wise banker or business man used to proceed a little more cautiously when excess bank reserves dwindled, and more freely when excess reserves were large, so under the Reserve System he might well act with more caution when bills discounted were high and move with more freedom when they were low. The 1929 and 1936 figures illustrate this analysis.

Bills Bought.—The second item, "Bills bought," reflects two things: conditions in the bill market and, more generally, conditions in the money market. The particular conditions which give rise to larger holdings of bankers' acceptances by

the Reserve Banks have been described in Chapter X. It should perhaps be reiterated that these holdings of bills do not ordinarily express the direct operation of Federal Reserve policy. The initiative in the purchase of bankers' acceptances by a Reserve Bank is taken not by the Reserve Bank itself, but by member banks and dealers. The holdings thus respond directly to conditions in the market. The sizable holdings in March, 1929, reflected tight money conditions; the negligible holdings in March, 1936 reflected extremely easy conditions.

U. S. Government Securities.—This item reflects largely Federal Reserve open-market policy, as it was described in Chapter XV. Increases in holdings of government securities ordinarily imply an effort on the part of the Reserve System to bring about easier money conditions, and conversely, decreases in these holdings indicate an attempt to bring about firmer money conditions. The large holdings of government securities held in March, 1936, reflected the vigorous efforts made by the System to facilitate recovery from depression. The small holdings in the spring of 1929 resulted from the System's policy of putting pressure on the banks and market.

There is one change sometimes reported in System holdings of government securities which does not reflect major policy. It arises from the occasional purchase by the Reserve Banks of securities under sales contract. As was described in Chapter VII, purchases of this sort are made in order to provide the market for government securities with funds when money tightens temporarily. Such purchases are initiated by the dealers in government securities and are thus in a limited sense involuntary, as far as the Reserve Banks are concerned, and are similar in character to the purchases of acceptances from dealers.

Prior to the passage of the Banking Act of 1935 there was a second exception which took place at the quarterly tax dates. At those times the Treasury usually had to pay out large sums of money to redeem maturing issues before it received the returns from income taxes. To bridge the gap the Treasury borrowed from the Reserve Banks by selling to them temporary one-day certificates of indebtedness, and these appeared

in the weekly statement in the holdings of government securities. Increases in such holdings, due to this cause, did not in any way represent open-market policy, but were temporary accommodations extended to the Treasury Department. This operation cannot take place under the terms of the Banking Act of 1935, which requires that all purchases and sales of government securities by the Reserve Banks shall be in the open market.

Industrial Advances.—The significance of this item was described in Chapter IV. It reflects an emergency power of the Reserve System to make loans to industry for working capital during such periods as the Board of Governors may consider it desirable. No such powers existed in 1929. The rather small size of the advances and commitments made in 1936 reflects the limited number of cases the Reserve Banks had been able to find in which such loans were justified, and appears to indicate that the sound and legitimate needs of business were being generally well cared for.

Other Reserve Bank Credit.—This balancing item consists largely of "float," that is checks handled by the Federal Reserve collection system for which the depositing bank has been given credit, but for which payment has not been received. The item is seldom important for the student.

Total Reserve Bank Credit.—Over a period of years the figure for the total amount of Reserve Bank credit in use, the total of the five items just discussed, has been perhaps the most revealing single figure with respect to the adjustment between the country's supply of funds and demand for funds. In Chapter XVII the way in which the country's credit now rested, not on gold alone, but on gold plus Federal Reserve credit was described. The item is practically identical with the item "total bills and securities," which appears in the complete Federal Reserve statement and is another term for the total loans and investments of the Reserve Banks. The main difference is the inclusion of a few million dollars of float.

Under normal conditions when demand for funds increases relative to supply, total Reserve Bank credit goes up; when demand declines relative to supply, total Reserve Bank credit

goes down. It responds even more promptly and accurately to changing money conditions than do interest rates.

Unhappily for the simplicity and convincingness of this account the events of the past two years, as this book is being written in 1936, have temporarily thrown the Reserve Bank credit figure out of court as an index of credit requirements. Largely because of gold imports, the member banks now hold large excess reserves, and are quite independent of the Reserve Banks. For many months total Reserve Bank credit has been at a practically constant figure and has consisted almost wholly of government securities, held at the volition of the Reserve System, rather than obligations representing demand for credit from the banks and market. Even though it was maintaining more credit outstanding than the market required the Reserve System has been reluctant to retire credit through the sale or maturity of its portfolio of government securities because of a desire to maintain the maximum of incentive for the use of credit.

It is interesting to contrast with this situation the character of Federal Reserve credit outstanding in 1929. The amount in 1929, while smaller, represented almost wholly a response to demand of the banks and market and hardly at all the direct purchases by the Reserve Banks.

A Reflection of Business Activity.—The total amount of credit the Reserve Banks are extending to the member banks or the money market has in normal times responded quickly to changes in business. For when business expands it needs more currency and credit, and when it contracts it needs less. It has also reflected changes in the supply of credit from such causes as gold imports or exports or changes in governmental monetary policy.

It is the additional demand for currency which always accompanies increasing business that ordinarily makes necessary increased use of Federal Reserve credit. This was illustrated in Diagram 10 on page 79.

Because they have reflected changes in currency and credit demands, total Reserve Bank credit, or total bills and securities, have had a characteristic seasonal movement as is shown

for two typical years by Diagram 48. Each succeeding year duplicated to a considerable extent the movement of the preceding year. When business was dull in January and currency returned from holiday circulation, the banks repaid some of what they had borrowed from the Federal Reserve Banks;

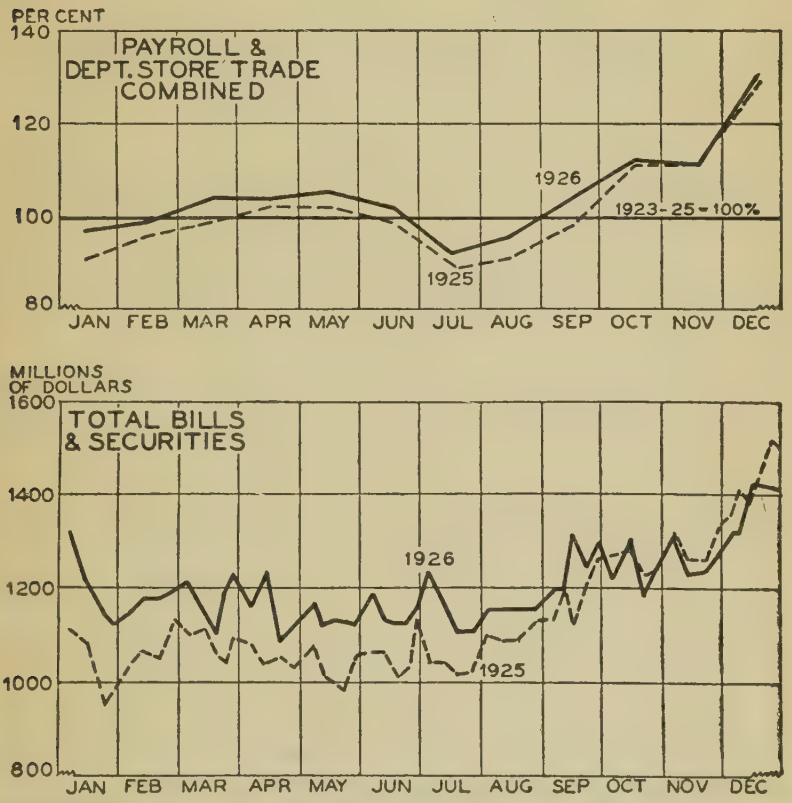


DIAGRAM 48—TOTAL BILLS AND SECURITIES REFLECT PROMPTLY SEASONAL VARIATIONS IN BUSINESS, AND CHANGES IN BUSINESS CONDITIONS AS WELL.

when spring came they called upon the Reserve Banks more largely for credit; in midsummer, when trade was quiet, the bills and securities of the Reserve System were reduced; then, in the autumn, trade expansion was followed by an increased call on the Reserve Banks culminating in a large expansion to meet currency needs at Christmas time. In order that the reader of the Federal Reserve statement may make allowance

for seasonal tendencies, the statement gives each week not only the figures for the preceding week, but also the figures for the corresponding week a year ago.

Diagram 48 illustrates not only the seasonal variations, but also the promptness with which total bills and securities reflect changes in business. All during the greater part of 1926 they ran ahead of 1925, and then in October they began to run behind 1925. There was a corresponding movement in business indexes for most of that period.

Monetary Gold Stock.—No item in the statement shows larger changes between 1929 and 1936 than the monetary gold stock. Of the increase of about 6 billion dollars in this period 2.8 billion is accounted for by the revaluation of gold in January, 1934, and 3 billions by gold imports in 1934 and 1935 following the revaluation. About 1 billion dollars of the much smaller gold stock in 1929 was in circulation in the form of gold certificates, and much of the rest was held as bullion, coin, or certificates in the Federal Reserve Banks. But since the passage of the Gold Reserve Act of 1934 all the country's stock of monetary gold has been concentrated in the United States Treasury, and title is held by the Treasury, but a large part of it is held there as backing for gold certificates or gold credits which constitute the reserves of the Federal Reserve Banks. Out of the total monetary gold stock of $10,177,000,000 on March 25, 1936, a total of $7,681,000,000 appears on the Federal Reserve statement as "Gold certificates on hand and due from U. S. Treasury" and "Redemption fund—F. R. notes." The difference between the monetary gold stock and Federal Reserve holdings consists of the unused balance of the $2,000,000,000 Stabilization Fund set up by the Gold Reserve Act of 1934, gold reserves of $156,000,000 against United States notes, and other gold held in the general fund of the Treasury.

Changes in the gold stock from time to time are largely the results of gold exports and imports, though some slow increase is due to domestic production of gold and reclamation of scrap gold for monetary use. As has been suggested earlier the steady increase in gold stock recently is a matter of major

concern, because gold imports enlarge the reserves of member banks.

Treasury and National Bank Currency.—This is the last of the items which are listed in the weekly Federal Reserve summary statement as factors supplying reserve funds. It includes all the currency supply for which the Treasury is responsible: silver dollars and certificates, subsidiary silver and minor coin, United States notes, and Federal Reserve Bank notes and national bank notes. The last two kinds of currency are in process of retirement and for both of them the Treasury has now assumed liability after having received reimbursement from the Reserve Banks and national banks. This is not a very active item but is being diminished by the gradual retirement of national bank notes and increased by the issue of additional silver certificates as further silver is purchased under the Silver Purchase Act of 1934. In this way the silver purchases have an effect similar to gold imports in increasing bank reserves; they account for most of the increase in this item between 1929 and 1936.

Money in Circulation.—Turning from the list of factors influencing the supply of reserve funds to the other side of the equation (factors using reserve funds), money in circulation is properly listed first in terms of origin and daily importance. Currency was in use before bank credit and still fluctuates from day to day more largely than the requirements of reserves for bank credit. The rules governing its behavior have been discussed fully in Chapter V.

Out of total money in circulation of $5,800,000,000 in March, 1936, only $3,700,000,000 represents Federal Reserve notes. Since the Federal Reserve statement proper includes only Federal Reserve notes, the more comprehensive item, made up partly from Treasury sources, is essential for a complete picture of the currency movement.

It is interesting that in the 1936 period of subnormal business money in circulation was one-third again as large as in the prosperity peak of 1929. Partial explanations are perhaps to be found in the continued hoarding of considerable money, the closing of many banks, which has probably decreased the

banking facilities available to some people, and the low rates of interest, which have made it less expensive to hold currency out of employment.

Member Bank Reserve Balances.—Ordinarily in the past the amount of member bank reserve balances in the Reserve Banks has represented little more than the legally required reserve. This was true in 1929. The item used to move rather sluggishly as changes in bank credit changed legal reserve requirements. But from 1933 to 1936, as noted earlier, these balances far exceeded legal requirements, and the amount of excess reserves has become a matter of current interest almost as it was before the establishment of the Reserve System. For this reason the Reserve Board has recently begun to make available each week, with the report of actual member bank balances, the figures for excess reserves above requirements. In March, 1936, actual balances were just about twice the legal requirements. As noted earlier, this item with "bills discounted" reveals the position of the money market.

Treasury Cash and Deposits with Federal Reserve Banks.—This item has grown from relatively small to huge size between 1929 and 1936. It has always included the spendable cash in the Treasury and, as the principal fluctuating element, government deposits with the Reserve Banks. On March 25, 1936, these deposits were over 1 billion dollars compared with $23,000,000 on March 27, 1929. Treasury spendable cash is also much larger, but the big new item included is the Stabilization Fund created by the Gold Reserve Act of 1934.

A word of explanation is desirable as to government deposits with the Reserve Banks. These deposits represent the working balance of the government against which it draws checks for current payments of various kinds, ranging from pensions to purchases of commissary supplies. When the deposits are depleted they are restored by selling new security issues for cash or by calling in deposits from depositary banks, where deposits have been created by the sale of government issues for book credit. The item "U. S. Treasurer—General account," which is the way the Treasury deposit is labeled

in the longer form of the Federal Reserve statement, was usually maintained before 1935 at a figure between $25,000,000 and $100,000,000 but in December, 1935, it jumped to about $600,000,000 as many banks paid for the December 16 Treasury offerings with cash instead of book credit, and similarly on March 16, 1936, it jumped to over $1,000,000,000. The reason for this was that banks could not use the money profitably and would have to pay an assessment to the Federal Deposit Insurance Corporation on the government deposit. In the past an increase in government deposits in the Reserve Banks was frequently accompanied by firm money conditions because this money was drawn out of the money market. But with bank reserves so large such withdrawals have had little effect.

Nonmember Deposits and Other Federal Reserve Accounts.—This is a catchall item usually of no great importance from the point of view of the money market. One of the most interesting items included is foreign bank deposits, placed with the Reserve Banks by foreign banks of issue, largely to meet their current payments in this market. In later years, as was indicated in Chapter XVII, foreign banks of issue have kept considerable sums in this country, but most of these sums have been in the form of investments, and the balances maintained with the Reserve Banks have been simply working balances. The amounts invested by the Reserve Banks for these foreign banks are not reported upon except as they appear in the next to the last item in the full statement, "Contingent liability on bills purchased for foreign correspondents."A part of the funds which the Reserve Banks have invested in this country for foreign correspondents has been invested in bankers' acceptances, and when these carry an obligation of the Federal Reserve Bank they are shown as a contingent liability. Since there have been no such purchases lately this item has not appeared in the statement for some months. Foreign bank deposits are ordinarily a small item and fluctuate but little, but any fluctuations have the same effect on the money market as fluctuations in government deposits. Other deposits represent primarily the deposits

of nonmember banks, which have clearing accounts at the Reserve Banks. This is an item which also fluctuates very little.

The foregoing discussion of the Board's summary statement has of necessity included a consideration of most of the items in the complete statement of any importance except to the most meticulous student. Two or three other items perhaps deserve brief comment.

Collection Accounts.—Two other comparatively large items in the full statement which have not been commented upon have to do with the operations of the Reserve Banks in handling checks for collection. On the assets side an entry appears as "Uncollected items," which represents the checks which the Reserve Banks have received for collection, but for which they have not been reimbursed. On the liabilities side another entry appears as "Deferred availability items," for the proceeds of these uncollected checks are to be credited to member bank accounts at the end of certain specified periods, in accordance with the time schedule which was described in Chapter VI. The amount for "Uncollected items" is usually a little larger than that for the "Deferred availability items," for the Reserve Banks are constantly giving banks credit for the checks deposited with them, in accordance with a time schedule and without waiting for the actual collection of the checks. The time schedule is a little more generous than the time which is in fact required to collect the checks, and thus the Reserve Banks currently advance a small amount of funds to the banks, the "float" previously mentioned.

Reserve Ratio.—The reserve ratio is the ratio of the total reserves of the Reserve Banks to their liability for deposits and notes in actual circulation. This ratio is of importance because the law prescribes that a ratio of 35 per cent of gold certificates or gold credits with the Treasury or lawful money must be maintained against deposits, unless suspended by the Board of Governors, and a ratio of 40 per cent in gold certificates or gold credits with the Treasury against note circulation. In the published statement the percentages against notes and against deposits are not treated separately, but are

lumped together for purposes of convenience. In recent years, except for a few weeks in 1933, the reserve ratio has had little significance because the reserves of the System have been so large that fluctuations in the ratio could be completely disregarded in the determination of Federal Reserve policy. This is in marked contrast with the experience of many other countries in which the reserve position has often dominated policy. On March 25, 1936, the ratio was 78.2 per cent compared with 71.3 per cent on March 27, 1929.

Using the Statement.—The Federal Reserve statement, as must have appeared from this discussion, is not a simple affair. It cannot be simple because it is an epitome of the nation's banking affairs. It has been suggested here that the casual reader can learn much of the current trends in business and finance if he will observe the movement of a few items in the statement, especially those published separately in the statement showing the supply and use of reserve funds. These items tell a revealing story of the changes in the nation's business and finance. The statement reflects the tremendous changes which took place during and following the great depression, and which made necessary the rewriting of this book.

SUMMARY

1. The Federal Reserve System publishes one of the most complete weekly statements of any bank of issue in the world.
2. This statement reflects each week the country's banking operations and indirectly the movement of business.
3. In addition to the complete statement the Reserve Board now publishes a summary balanced statement showing changes in the supply and use of member bank reserve funds, which substitutes exact accounting for guesswork in revealing the major influences on money conditions.
4. "Total bills discounted" represents total borrowing by member banks at the Reserve Banks—the amount of Reserve Bank credit in use for which member banks feel direct responsibility. It varies closely with money rates.

5. "Bills bought in open market" reflects conditions in the bill market and in the money market generally.
6. "Total U. S. Government securities" reflects largely Federal Reserve open-market policy.
7. The item "Total Reserve Bank credit" shows the total amount of credit extended by the Reserve Banks, and is ordinarily, in normal times, a valuable measure of the adjustment between the country's supply of funds and the demand for funds.
8. Because of huge gold imports the excess reserves of member banks have, at the date of writing, displaced other items in the statement as a focus of interest.
9. The reserve ratio has had little significance in most recent years. Reserves have been so large that the ratio could be ignored in determining policy.

CHAPTER XX

What About Money Management?*

WITHIN the past few weeks there have appeared three discussions of this country's long term monetary problems which are of great importance both by reason of their source and their content. Mr. Winthrop Aldrich has proposed that we should return to a full gold standard. Mr. Russell Leffingwell has reviewed a span of 22 years of monetary policy and reached the conclusion that we should be better off with less management. In the Federal Reserve Bulletin Dr. Goldenweiser has vividly reemphasized the nature and extent of our gold problem. These are questions bearing not alone upon business and finance, but upon the welfare of all the people. The discussion should be carried forward until the main points at issue are publicly understood. In these days when we are so much and so rightly concerned about more immediate problems, such as how to put idle men and money to work, these more basic problems may seem academic. But in reality they are essential parts of any reemployment program, for confidence in money is the basis of our system of free enterprise.

It is within this general area of longer term monetary policies that I propose to make some comments. I shall not discuss except incidentally New Deal silver and gold policies, unbalanced budgets, or deficit financing, or such other fascinating and important questions as the long term effects of present low money rates, or the effects of war. But, like Mr. Leffingwell, I want to think not on a 24 hour basis, but in terms of a long span of years. While he mentioned 22 years I have been thinking of 25 as a significant number because the Federal Reserve System has just celebrated its 25th birthday.

* An address before the Connecticut Bankers Association on January 25, 1940.

For any conclusions about monetary management shorter periods are misleading. We thought we were managing money pretty well in the middle twenties, but Mr. Leffingwell comes to the conclusion that we were sowing then the seeds of our later discontent. It may well be said of monetary policies that "the sins of the fathers are visited upon the children."

Money, Business and Employment.—In dealing with so large a topic so briefly I shall necessarily omit many qualifications, and run the risk of appearing dogmatic.

First, even at the risk of being a little theoretical, a few words should be said as to the relation between money and business and employment. The central facts as I see them may be summarized as follows.

In the history of this and other countries business activity tends to move in waves, from prosperity to depression and back again. The outstanding characteristic of these periods is their changing psychology. At one time business men and individuals are optimistic and conduct their affairs with an eye to the long future. At another they plan only a few weeks ahead. These periods tend to be cumulative and lead on the one hand to over-enthusiasm and speculation, and on the other to undue pessimism and despair. The problem of achieving greater stability of business and employment is largely one of checking the periods of optimism or pessimism before they go too far and carry the country either into over-speculation or depression. One of the most important conclusions which now appears to be justified is that control, while more unpopular, is more effective on the up-side than on the down-side. For, once over-expansion and over-speculation have gone too far and finally crashed, a compensatory period of readjustment and depression is almost impossible to avoid.

A recently published study by Col. Leonard Ayres, which goes on the list of required reading, demonstrates more positively than heretofore the influence of monetary forces at the turning points of the cycle. The relationship indicated in these studies, covering a long period of this country's economic history, is that the fluctuations in business respond to conditions in the security markets and in particular to the supply

of funds made available to business through the public sale of stocks and bonds. This in its turn is linked with changes in the money supply and its price. The nature and timing of the cycle are of course influenced by many other factors, but none appears so consistently present at the turn of the cycle as this money factor.

The Twenty-Five Year Record.—Against this general background I suggest that we take aerial observations of the record of the past twenty-five years of business since the Federal Reserve System was established. For with the Federal Reserve we adopted a form of money management which might be hoped to operate towards stability. What are the facts? They are readily available in a number of measures of production, employment, and of various other aspects of business. The facts as shown by these measures are that the fluctuations in business have been greater in the past twenty-five years since the Federal Reserve System was established, than heretofore. The depression of 1921, while not unusual in duration, was more severe than any of its predecessors; business activity dropped further; unemployment was greater both in numbers and percentages. Then the depression of the thirties made '21 look like a pigmy; it has been far and away the worst both in extent and duration.

It would, of course, be foolish to leap to the conclusion that the Federal Reserve System was responsible for the extent of these depressions. One can think of a good many reasons why the depressions have been worse in this twenty-five year period.

The first is that this has been a very difficult period which has reflected the economic dislocations of the World War. These depressions are properly called the primary and secondary postwar depressions. Unstable currencies and vast gold movements have reflected world-wide economic disorder.

A second reason arises curiously enough from our very prosperity and high standard of living. When a large part of a country's production consists of luxury and durable goods, the possibilities of postponement of purchases are multiplied. When a cloud appears in the sky and people postpone buying,

it may cut production 25 to 50 per cent, and the cut is cumulative, for every man thrown out of work in turn decreases purchasing. Another corollary of the high standard of living is that more people live in cities, and fewer on farms. In more primitive periods men out of work went back to the farm. Today that door is less open, and hence the economy is less elastic to take up the shock of depression.

But even when allowance has been made for these causes of instability I want to raise the question whether there is not in addition a change in the monetary mechanism which has tended to encourage bigger booms and deeper depressions than formerly.

Changes in the Mechanism.—Let me remind you of a change in the operation of the business cycle due to the establishment of the Reserve System. As basis for the comparison suppose we examine first what happened in 1907. The story briefly is this: 1905 and 1906 and the first half of 1907 constituted a period of great prosperity. Industrial production was active. Workers were well employed. Stock prices were rising and reached, in fact, the highest level for many decades. The amount of new capital issues was large. It was a period when the dangers of over-speculation and over-production of one sort or another were imminent. What happened to bring it to a close? There seems general agreement that the primary check to further expansion was that the supply of money ran out. The expansion of business and of prices had brought with it an expansion of the amount of currency in circulation. That, together with the expansion of bank credit, used up the available supply of funds, and bank reserves began to show deficits. There existed at that time no ready means by which the supply of money could be increased and given elasticity. As a result there was a brief money panic. It was difficult to obtain currency. As a consequence industrial production promptly declined. Stock prices went down. Capital issues diminished and business and finance went through a period of rapid readjustment.

Comparing this sequence with more recent periods, the surprising thing is how rapid the period of readjustment really

was. The decline occupied only a few months, and by the middle of 1908 business was well started on another upward swing, but with the situation readjusted. A number of weak business and financial institutions had been liquidated and over-speculation had been pretty well squeezed out.

It may be noted that the process of readjustment in 1907 and 1908 was painful, but that the pain did not last very long. It was painful enough, in fact, so that the experience was vividly in the minds of the legislators who devised the Federal Reserve System.

Turning to the more recent period, and ignoring other influences, we may ask ourselves what are the differences in the monetary mechanism, which distinguish it from the sequence of events in 1907.

First, as to 1920 and 1921. The conclusion of the war in November 1918 found this country's credit structure greatly expanded. There was every expectation that the war would be followed immediately by depression, but there was, among other influences, a new money element in the situation. Whereas in 1907 the money supply was limited, in 1918, 1919, and 1920 it had elasticity through the mechanism of the Federal Reserve System. Even though credit and currency were over-expanded, money could still be obtained at the Reserve banks through the rediscounting process; and that is what happened. Thus, without the restraint of any definitive limitation upon money, bank credit continued to expand through 1919 and the early part of 1920; prices continued to rise, and with favoring money rates the Treasury was able to take care of its final bond issues for the war. It was only after the expansion of money and prices had gone to an extreme point that the Federal Reserve authorities, delayed by Treasury influence, finally used their powers vigorously to check the expansion.

The important difference between the two periods, as far as money mechanism is concerned, was that in 1907 the check to over-expansion was automatic, the supply of money ran out, whereas in 1920 there was no automatic check. The reserve reservoirs of the banking system were open until the authori-

ties made a decision about closing them. In other words, money management was substituted for automatic limitation. It also seems clear that the extreme depth of the 1921 depression is largely accounted for by the extent of the over-expansion in 1919 and 1920. If the expansion had been checked earlier the depression in all probability would have been less severe.

The story of the late 20's is somewhat similar with reference to the monetary mechanics. The business boom was kept going with the use of Federal Reserve facilities. In 1924 and in 1927 incipient depressions were checked by expansive action on the part of the Federal Reserve System. In 1928 and 1929 at the height of the boom there was no automatic limitation on expansion, and restraining action in the form of discount rate increases and open market operations proved ineffective, partly because they were regarded as artificial and money was still readily obtainable. The movement was checked only after decisive increases in discount rates in August 1929. Here again it seems highly probable that if the expansion had been checked earlier the succeeding depression would have been less severe.

This is, of course, presenting the case in very bald outline and leaving out all mention of a great many complicating factors such as the world monetary position, the longer term influence of the war, increased mechanization of industry, etc., etc. But none of these qualifications seems to me sufficient to offset the central core of evidence that since we have had elasticity of credit and currency, so that a money shortage no longer acts as an automatic limitation, the mechanism has tended to be less effective in checking over-expansion.

In this connection it is interesting to recall that when the Federal Reserve Act was under discussion Senator Elihu Root made a speech in which he foresaw something of this difficulty and said that the proposed new banking legislation would launch the country "on a career of inflation." Events in 1919 and 1920 and in the late twenties lent some support to this prediction.

Handicaps of Management.—Even aside from the extraordinary economic confusion of the recent period money management has encountered grave difficulties. The first was

a general failure to recognize the responsibilities of management inevitably involved in the notion of elasticity. The Reserve Act quite failed to define the problem: discount rates were to be fixed simply "with a view of accommodating commerce and business," not as an influence toward stabilizing the economy or avoiding inflation and deflation. It took almost ten years of operation of the System before its true and unavoidable function was recognized.

The second problem was to know how and when to act in a very complicated economic situation. Taking early 1937 for example, was that the beginning of a real inflation that should be nipped in the bud, or merely a fluctuation that could safely be allowed to run its course? We don't know yet. For this as for other periods, the central banker can never prove that the dangers he feared, and acted to prevent, would really have occurred. Every policy decision is in reality a prediction of the economic future, and the lack of success in such predictions is notorious.

The third handicap is pressure, political and otherwise, on those who have to make the decisions. Both businessmen and politicians love expansion and don't want it stopped. When the job is to stop expansion before it goes too far, the whole environment is in opposition. Witness 1929. In Washington the Reserve Board remembered the violent attack in Congress on the so-called "deflation policy of 1920," which had in fact unseated Governor Harding. In New York State a speculator even brought suit against the New York Reserve Bank for raising its discount rate. The money manager who does his job is the world's champion kill-joy, and the pressure on him to delay, to leave well enough alone, is constant and great.

Perhaps under these handicaps it is a wonder that the System has done so well. And it should be added that at all times both in Washington and in the Reserve Banks the decisions have been made by earnest conscientious men seeking to do their duty as they saw it.

Even after making these allowances the facts in themselves go far to support Mr. Leffingwell's appraisal of managed money. The results so far have been unsatisfactory.

What Can Be Done?—The next question is, "What's to

be done about it?" One is tempted to suggest that we turn the hands of the clock back, abolish all powers of monetary control, and leave the Reserve System simply as a service station for the banks and Treasury, to handle money and checks and other semi-mechanical service. That would mean no rediscounting, no open market operations, no changes in reserve requirements; for all of these are the mechanisms of money management, make no mistake about that.

To spell the proposal out is to answer the question. It can't be done. Politically it is impossible. Once the people have taken over money management they are going to keep it, partly for fear that otherwise private interests will in fact manage money for private gain in a way which might be hurtful.

I doubt if we as bankers think we should be better off with a return to an automatic mechanism. Without the Reserve System, financing our part in the World War would have been harder; the gold flow afterwards would much more surely have inflated us; and any depression comparable with the recent one would have brought us management in different and perhaps worse form. It is hard to conceive any method of bringing our present gold hoard and tremendous gold movements within the framework of any effective automatic mechanism.

No, we cannot, if we would, turn back to the simpler monetary system of the past, and I doubt if seriously we would. The alternative seems to be to explore the possible means by which the management we have might be safe-guarded and improved.

Let me suggest very briefly some of the more promising avenues for exploration.

1. *Limit and Simplify Management.* First, we should consider ways in which the problem of management may be simplified both by narrowing the area within which decisions must be made and by embodying in the mechanism such checks and limitations upon unsound practices as are feasible.

The first and most obvious move in this direction is to repeal

some of the legislation for dealing with emergency conditions already past, which now have the double effect of confusing and complicating the problem of monetary management and of impeding the restoration of confidence. Since a number of these laws provide for administration by the Treasury, they divide authority for monetary policy between different arms of the government, with almost inevitable resulting confusion. There is clearly no need for the provision authorizing the issuance of unsecured greenbacks, and there never was any sound economic reason for the silver legislation.

With respect to the power to devalue the dollar and to deal in gold or securities with the stabilization fund, there is more room for difference of opinion, especially in view of the continued unsettlement of world finance. It must be recognized, however, that as long as these powers exist the responsibility for monetary policy is divided. The return to a fixed gold parity, supported by free movements of gold, would simplify this problem, and would be something of a safeguard and restraint in that it would make over-expansion, the use of inflationary devices, or long continuance of unbalanced budgets less easy. For policies of these sorts tend to result in gold movements. The gold standard is a little like a fever thermometer. It sometimes frightens you unduly and at the wrong time, but it is usually helpful, and smashing the thermometer is a dangerous way to deal with a fever. I am inclined to agree with Mr. Aldrich in advocating going the whole way and putting gold in circulation as a means towards restoring confidence in money and of making still more difficult in the future changes in its gold value. In the long-term history of money such changes have been made more frequently for political than for sound economic reasons. With our present strong gold position we can afford to lead the way. I see no important advantage in delay. In those areas of the world where trade is still possible we shall be in a much stronger position to advocate and assist in achieving that currency stability which is essential to trade if our own position is definitely assured. Such action is a logical part of any program for lowering trade barriers.

We should, however, have no illusions that the restoration of the gold standard would eliminate management. With our present huge gold supply we must still have management, but the area for management would be somewhat narrowed, and responsibility would be less divided.

As to the more permanent establishment, question might be raised as to limiting and simplifying certain powers of the Reserve System. As a protection against possible abuse, there is much to be said for a limitation, such as is in force in a number of other countries, on the amount of government securities the System can hold. The power over reserve requirements needs much study. In the face of enormous excess reserves the power to increase reserve requirements should probably be continued and enlarged. On the other hand the power to reduce them once they are raised is quite another matter. Changes in reserve requirements are a method of adjusting to a new gold situation, and clearly should not be used as a current operating mechanism.

2. *Improve Management.* Even more important than the limitation of powers is the improvement over a period of years in the experience and capacity of the people who exercise powers of money management. To some extent this will take place naturally: the managers are today more experienced, more aware of their function than they were a few years ago. But there are serious faults in the set-up. The best way to bring this out is perhaps to compare our money management board with the Supreme Court. The Reserve Board exercises powers no less important for the well-being of the people than the Supreme Court, but the provisions for getting the best personnel are far less good. As to salary, Supreme Court justices receive $20,000 (which is too little), appointment for life, and may retire at 70 on full or half pay, depending on length of service. A Reserve Board member receives $15,000, with no retirement allowance, and must retire on completion of his 14 year term. That is a serious block to getting the best men, and many have served at great personal sacrifice.

There is no legal geographical limitation on Supreme Court

justices, but good men have often been unavailable for the Reserve Board because not more than one may come from any Federal Reserve District. Every member of the Supreme Court is a lawyer, with years of legal experience behind him; but membership in the Federal Reserve Board must by law provide for representation of the financial, agricultural, industrial, and commercial interests. It is not required that every Reserve Board member shall have had experience in finance. These rules have meant that in many cases the best men in the country could not be appointed, and even when very good men were appointed many of them did not have the particular training or capacity to fit them for one of the most exacting and important responsibilities in the country.

I have long thought that the System might be strengthened by a provision under which a number of the members of the Board would be presidents of Reserve Banks, serving in rotation, receiving their salaries as presidents and continuing on the pension system. It would assure a body of practical experience on the Board, would be valuable training for the presidents and make their work more interesting, and would improve the relations between the Board and the Reserve Banks. The Federal Reserve Banks have provided an effective mechanism for the training of men in central banking, (which is different from commercial banking) not subject to the same limitations as the Board. By a curious perversity the tendency of recent legislation has been to make less, rather than more, effective use of this personnel.

Of course we must all recognize that this question of the organization of the Reserve System is a political as well as a monetary question, and mainly for that reason the suggestions I have just made are very hard to carry out. Central banking is so vital to the public interest that there must be assurance that no private interests, no section of the country, and no political party can control it. Its action moreover is so related to the whole economic program of the government that complete independence from the Executive is difficult, especially in periods of emergency. And yet the political atmosphere is not one in which central banking does well. For as we have

said the decisions to be made are hard and often have painful immediate consequences, especially when the job to be done is to check over-expansion. Politics does not like to make that kind of decision, or to take the consequences. Thus the central banking system has the double responsibility of cooperating with other agencies of government, while at the same time preserving a certain freedom and independence of action. It is a tight-rope kind of job. This again calls for the finest personnel, equipped for the task by both experience and tradition, whose opinions will command the respect of both the political authorities and the public. With our new understanding of the nature of the work to be done it seems to me clear that the present provisions of the Federal Reserve Act bearing on the organization and personnel of the top control of the System need overhauling.

3. *Support Management.* Up to this point we have been exploring ways in which other people might do their work better. Before concluding we might well ask what our own responsibility as bankers may be in these matters. One principle seems clear from the foregoing. It is that monetary management deals with a constantly changing problem in public psychology, and its success will depend upon public understanding of its objectives. The only way the law and organization of money management can be changed is with the support of public opinion. That is where our job comes in, and we shall get as good monetary management in this country as the bankers really want badly enough to work for. Our first task is to understand the problem ourselves. We are doing something about that through the American Institute of Banking, the Graduate School of Banking, and the research programs of the American Bankers Association, and the Reserve City Bankers. Our second task is to furnish leadership for public opinion on these financial questions, and on this task I fear we should all admit we have not made much progress. We have been busy with some very pressing problems of our own, and, moreover, the public has not exactly been clamoring for our views. Time is gradually changing that situation. The

public is more ready to listen when we have something to say. From now on it looks as though the future of our profession would be largely up to us.

Let me close by reiterating the earlier point that while this discussion may appear detached from present problems of war and neutrality and reemployment, in reality the relation is close. This war is being fought with money and machinery and the movement of trade. Whether we realize it or not the American dollar is the financial anchor for the world. The competence of our administration of this trust will react on the whole world both now and after the war. And our own further recovery from depression will be largely influenced by the people's confidence in the stability and future value of their money.

CHAPTER XXI

The 100 Billion Budget and the Banks*

ONCE more the President has startled the country with a budget of gigantic proportions—$24 billions larger than the current fiscal year's probable expenditures and six times as large as the biggest year of World War I. These relationships are shown in Diagram 49 on the next page.

This budget is the bookkeeping aspect of a huge job of production and organization of manpower and physical forces. The objective is the ships, guns, and planes, and the men to arm them and overcome the enemy in battle.

This means a further increase in the country's output piled on top of the almost incredible increases of the past two years. We must produce for war alone as much as was produced for every purpose in our best years of the past, and, in addition, we must produce enough to feed and clothe our population and carry forward essential civilian services.

The accomplishment of this great task will require, as the President said in his message, the full harnessing of the nation's manpower and resources. "Victory," he said, "cannot be bought with any amount of money, however large; victory is achieved with the blood of soldiers, the sweat of working men and women and the sacrifice of all people."

The experience of the past two years gives reason to believe that the objectives set are within our reach. A year ago the budget estimate for the fiscal year 1942-43 spending was $59 billions. The actual figures will be nearer to $80 billions. While this increase is partly due to price and wage advances, production goals for ships and tanks and guns and planes which seemed fantastic have largely been realized, and the sights have again been raised. Our country is producing as never before, and the curve is still rising.

* This chapter is quoted, with omissions, from a report of the Economic Policy Commission (of which the author was chairman) of the American Bankers Association, dated March, 1943.

The Inflation Threat.—The task before us requires not only great national effort, but also great national restraint. This huge spending program will pour into the hands of our

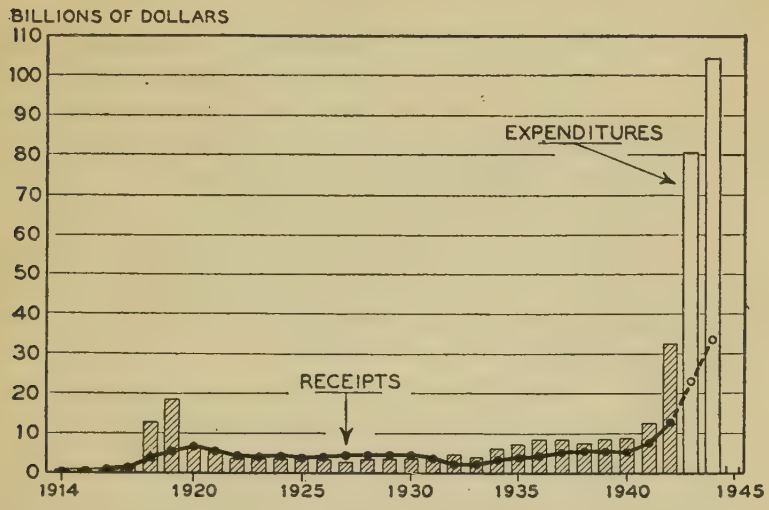


DIAGRAM 49—UNITED STATES GOVERNMENT RECEIPTS AND EXPENDITURES. (FISCAL YEARS JULY 1—JUNE 30; 1943 AND 1944 ESTIMATED. EXCLUDES OUTLAYS OF GOVERNMENT CORPORATIONS.)

people vast sums; the national income will be at new high levels. But civilian spending must be restrained because we cannot produce and import all the goods civilians would like. If spenders compete for a limited amount of goods they will drive prices sky-high; in other words, we shall have inflation.

The inflation threat, the peril of unrestrained consumer spending, is being dealt with on several fronts:

1. Price controls and rationing
2. Cuts in non-essential government spending
3. Taxation
4. Bond sales to the people
5. Other voluntary saving

All of these forms of restraint are necessary and we are daily learning more about them, their uses and their limitations. Especially are we learning how hard it is to make laws

and rules to restrain some people without inflicting undue and perhaps unnecessary hardships on others. Strongly intrenched pressure groups resist restraints. The administrator of the functions of rationing and price control needs every sympathy and every aid from patriotic citizens.

The banks are aiding in the administration of the rationing program as it expands to cover an increasing number of commodities. It may safely be stated that their work will be done thoroughly and efficiently and will ease the burden on the rationing administration and on business.

Some economy in the non-war activities of government has been achieved. More pruning in the non-essential expenditures of national, state, and local governments is possible and urgently necessary, and also more economical administration of essential functions.

The country is also learning that there is no painless form of taxation which will draw off all the excess buying power and thus prevent inflationary spending. No one has yet devised a plan for extracting the spendable surplus from a war worker whose wage has jumped from $30 to $80 a week, without wrecking the living arrangements of the white collar worker whose increase from $40 to perhaps $45 has failed to keep pace with the rise in his cost of living.

The tax program still leaves much to be desired. A larger proportion of the newly-created income should be drawn back into the Treasury currently. Nearly all are now agreed that some form of pay-as-you-earn tax is essential and very many qualified students think a sales tax is also necessary.

But no equitable tax program can take the whole surplus income. Refundable taxes, commonly called compulsory savings, encounter the same limitations. There will still remain much spending power which can be reached only by voluntary means. It is in this area—bond sales to the people and voluntary savings—that the banks have their special opportunity.

The nation looks to its bankers for leadership in sound finance. This applies to bankers in small communities as well

as in larger ones. Whatever its effect on us as individuals, we must urge increased taxes up to the maximum that can be borne without checking the war effort. We must encourage purchase of more and more government bonds by individuals.

Selling Governments Outside the Banks.—The December drive, under the leadership of the Victory Fund committees, was more successful than had been expected. A goal of $9 billions was set and nearly $13 billions of securities were sold, including December sales of War Savings Bonds. But at the Treasury and among the members of these committees it is recognized that only a start was made in the great task before us.

In the first place, the amounts of money required by the Government are steadily increasing. In the present fiscal year, which ends on June 30, 1943, the total amount of public financing will be about $58 billions. In the next fiscal year, from July 1, 1943, through June 1944, the total to be raised will jump to $70 billions on the basis of present estimates of expenditures and present tax laws. This may and should be reduced through additional taxes but, in any event, represents a huge task if it is to be financed without serious inflationary consequences.

Also, the December financing included the sale of $5 billions of securities to the commercial banks, which is potentially inflationary. It is most desirable that in the next drive a far larger proportion of the securities should be taken by other investors, and particularly by individuals. For it is money in the hands of individuals which is the chief inflationary menace.

The Next Drive.—The Secretary of the Treasury has announced that the next drive to sell bonds will take place in April. A series of conferences has been held to lay the basis for this drive. The Victory Fund committees and War Savings staffs in the different districts have drawn up suggestions and are carrying forward their plans of organization. Their representatives have met in Washington with the Treasury and officials of the Federal Reserve System. The committee of the American Bankers Association appointed by President Hem-

ingway in November has held two meetings at the Treasury since the first of the year. As further specific plans are to be announced from time to time, it seems desirable in this report to deal only with some of the principles which are likely to determine the success or failure of the drive.

Of first concern is the manner of organizing for a broader coverage of individual prospects. Solicitations made directly by commercial and investment bankers will need to be supplemented by committee activity reaching people where they work and through their social and religious groups.

As a primary contribution to the success of the campaign, the commercial banks should make staff assignments for efficient handling of the great volume of work involved in entering subscriptions, collecting payments, and making deliveries of securities. Services of this nature are regularly performed by the banks in connection with the War Savings issues, but new problems and pressures on staff develop under the stress of a drive.

Secondly, the banks are expected to assume a direct sales responsibility. There was ample evidence in December that depositors are glad to have the Treasury's sales appeal made to them by their bankers, and this obligation should be willingly accepted both as a patriotic duty and as a service to our depositors.

Finally, but of primary importance, bankers should exert every influence to afford more and better publicity for the next drive. The press, the radio and the movies all can help immeasurably to prepare the way for the sales approach. Far from limiting it to the choice of a good investment, the appeal should be made to patriotism and teamplay, dramatized when possible by the personally related experiences of our fighting men.

In facing the task of selling more bonds in April than in December we should be encouraged by remembering that we can draw upon a larger body of funds. Bank deposits and currency held by individuals and corporations are several billion dollars larger than last December first, due to the huge outpouring of government spending. Other uses for money are

being restricted, so there is more money available. The goals can be reached if we who are responsible for selling the bonds do a good job of presenting the case to those who have the money. Higher taxes are drawing off part of these funds but there is still a large surplus not yet at work in the war.

Answers to Two Questions.—There are still a few bankers who question whether they can afford the drain on their deposits which will result from a vigorous program of sales of government securities to their depositors. This question, fortunately, is being answered by the experience of banks all over the country. For they are finding that the deposits which go out of one account through the sale of government securities come back a little later in some other account.

The overall program of government financing carries with it inevitably a large increase in deposits and these new deposits are finding their way into almost every bank in the country. It is true that bank deposits in munitions and food production areas are growing most rapidly, but it is remarkable how the increase spreads itself out and is distributed into nearly all corners of the banking structure.

When a bank depositor subscribes for government bonds the bank through which the subscription is made does not at first lose any funds if it is carrying a government war loan deposit account; there is simply a transfer from private deposits to a government deposit on the bank's books. When the Government draws down its deposit, it means only a temporary reduction in aggregate deposits because the Government promptly spends the money and it comes into the hands of some other depositor somewhere. While to many this was only banking theory a few months ago, it has now been demonstrated conclusively through the experience of bank after bank. As the deposits go out through customer subscriptions for bonds or through government withdrawals, there is reasonable certainty that over a period they will return, though usually under different ownership.

Another question troubling bankers is how they can find the time for a sales campaign with staffs reduced through loss of personnel to military and other services and with the

volume of work increasing. This problem finds its answer both in patriotism and in enlightened self-interest. There is no other agency in the strategic position to perform this service. Moreover, the record of the last war shows that in many cases the banks which actively and energetically did the war work were the ones that recorded lasting growth in their volume of business. The same seems likely to be true this time. Customers want to associate themselves with institutions

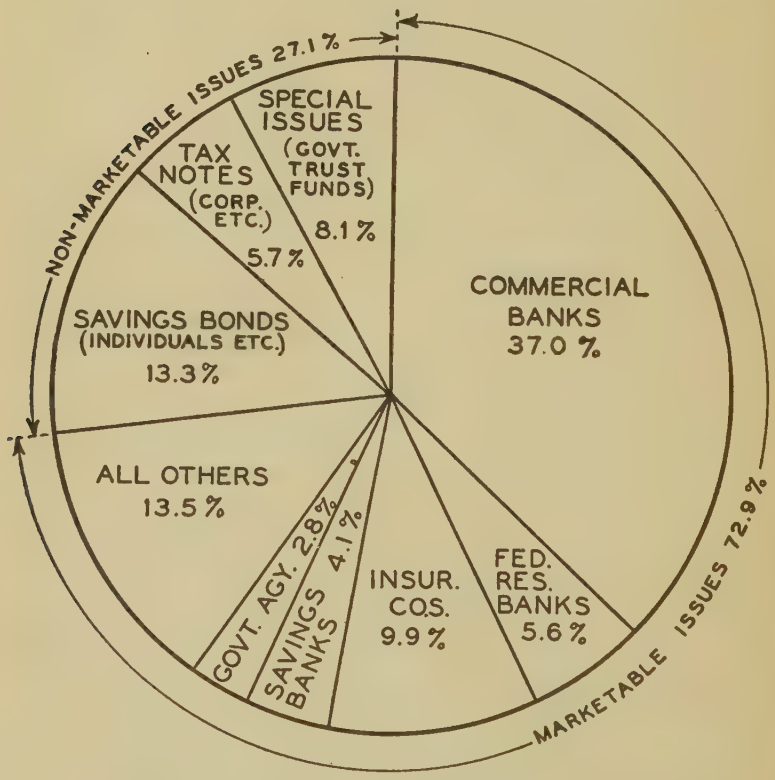


DIAGRAM 50—OWNERSHIP OF U. S. GOVERNMENT SECURITIES DECEMBER 31, 1942.

that are vigorous and energetic and are performing their banking functions in a broad way. Also, the place of the banks in the body politic will be affected by the way we do this job.

It is an unusual opportunity for us to demonstrate the public usefulness of the private banking system.

The Banks' Own Subscriptions.—Even after the best possible efforts to sell securities to customers, the banks themselves will be called upon to absorb a substantial amount of government securities. Bank holdings have increased by leaps and bounds in the past few years, and Diagram 50 shows that commercial banks now hold 37 per cent of total outstanding government securities.

The pattern of financing through the banks is becoming well established. While it looks like an impossibility for banks with less than $2 billions of excess reserves to buy $9 billions of government securities in the current 6 months' period, we have learned by experience how the process of buying these securities works out.

The procedure is about as follows. A bank subscribes for government securities, making the payment by an increase in its war loan account. This requires immediately an increase in its reserves,* but those reserves have in one way or another been made available as the Federal Reserve System has purchased securities in the market, or has reduced reserve requirements. For example, in the last six months of 1942 the member banks of the Reserve System bought over $13 billions of government securities and supplied depositors with $3 billions net of additional currency. Despite the dollar for dollar loss of reserves occasioned by currency withdrawals and despite also the increased reserves needed to back the new deposits created by government borrowing, excess reserves were reduced by only about half a billion dollars. This was mainly because the Federal Reserve Banks made $4½ billions available through open market operations and through reducing the required percentage of reserves to deposits of central reserve city banks.

* A bill now before Congress would eliminate the requirement for reserves against government war loan deposits as well as F.D.I.C. assessment against such deposits until six months after the war. With this arrangement the requirement for reserve would become effective only when war loan deposits are withdrawn, the funds spent by the Treasury and returned to the banks as ordinary deposits. This would make more gradual the need for added reserve. (This was passed.)

During the period, however, individual banks have often found themselves short of reserves through shifting of deposits, withdrawals of currency, or otherwise. The usual method of meeting this situation has been through selling Treasury bills or certificates in the market or to the Federal Reserve Banks. These channels have been freely open at all times. These operations have in fact provided a demonstration of the ease of making reserve adjustments through the use of the various facilities available. The proof is to be found in the fact that at no time in recent months has there been any substantial borrowing by member banks at the Reserve Banks, although the discount rates have been reduced to ½ of one per cent on short governments and the Reserve System has been prepared to discount freely.

This experience suggests that the whole operation can be carried through with relatively little need for banks' borrowing at the Reserve Banks, although there is clearly no odium attached to such borrowing, and it would rather be a sign that a bank is prepared to do its share in carrying through war financing. Any bank which does not wish to borrow is likely to find no serious difficulty in making adjustments in other ways.

For a bank to handle these operations efficiently the two essentials are, first that it should pay for its subscriptions by war loan account, and second that it should carry a portfolio of Treasury bills and certificates.

What Is Each Bank's Share?—One question frequently asked is how a bank can decide how large a subscription it ought to enter for Treasury issues. A first principle is that banks should now be fully invested. With the large amount of Treasury bills and certificates available there is no longer any reason for a bank to carry more than a minimum of excess reserves. The bank carrying continuously large excess reserves is not doing its share in the program, and is losing earnings unnecessarily.

In fact, the weight of government financing is now being carried by banks with practically no excess reserves. Banks in this condition find that if they go ahead and subscribe their

share for each new issue, making payment through war loan account, they are able to maintain their positions in ways already indicated without serious difficulty.

A second yardstick is therefore desirable to govern banks in their subscriptions, apart from their reserve position. Perhaps the simplest such measure lies in the percentage of the bank's deposits invested in government securities. On December 31, 1942 the average bank in the United States held government securities equal to nearly half of its total deposits, and banks which are holding less than this amount might well examine their positions to see whether they might not do more. This percentage would of course be somewhat dependent upon a bank's loan portfolio. A bank which had a relatively large loan portfolio would not be able to subscribe quite so heavily for government securities.

The Treasury and the Reserve System have steadily refrained from fixing quotas for subscriptions of individual banks in the belief that this was not necessary. It seems much better for each bank to decide its own policy in the light of the foregoing suggestions and bearing in mind all the circumstances of its own position.

Will Deposits Disappear?—Some banks have been reluctant to become fully invested because of a feeling that their greatly expanded deposits were in the nature of fluff which would blow away with the first strong wind. They recall that in 1920 and 1921 bank deposits shrank very rapidly and compelled quite a liquidation of bank assets, and they wonder whether something like this will occur again.

The two situations are quite different, for the great expansion in bank deposits in 1917 to 1920 was primarily in commercial loans for the purpose of carrying large inventories of commodities. When the prices of these commodities dropped the loans were liquidated and, with them, the deposits. Farmers also borrowed heavily and later went through a period of liquidation.

In the present case the expansion of deposits is due to increased bank holding of government securities and the deposits would normally be liquidated as these securities are

redeemed by the Government or are sold to other investors. This is likely to be a gradual operation during which there may be some offsetting increases from commercial lending.

Even without much change in the total of bank deposits after the war, there may be substantial shifts in deposits between different regions of the country and different banks. The answer to this problem appears to lie in the character of the securities purchased. Many careful bankers are putting a large part of their newly acquired funds into Treasury bills and certificates which can always be liquidated promptly to meet any decline in deposits but which, nevertheless, enable the bank to do its share in the financing program and add to its income without incurring real hazard.

The Treasury has made every effort to design the issues it has created to meet this specific problem. The volume of Treasury bills and certificates outstanding has been steadily increased. The Federal Reserve System, moreover, has maintained a constant market for Treasury bills by announcing its willingness to buy such bills at any time at ⅜ of 1 per cent and to re-sell them again (if desired) at the same rate to the bank which offered them. It has in addition given support

TABLE 27—EFFECT OF GOVERNMENT SECURITY PURCHASES ON ALL MEMBER BANKS
(In billions of dollars)

	June 30 1941	Dec. 31 1941	June 30 1942	Dec. 31 1942	June 30 1943 (estimated)
Total Loans and Investments					
Loans	16.7	18.0	16.9	16.1	16.1
Governments	18.1	19.5	24.1	37.5	44.9
Other Investments	5.8	6.0	5.8	5.6	5.6
Total	40.6	43.5	46.8	59.2	66.6
Liabilities					
Deposits	58.5	61.7	64.0	76.0	81.7*
Capital Funds	5.8	5.9	6.0	6.1	6.2
Capital Funds Ratios					
To Deposits	9.9%	9.6%	9.4%	8.0%	7.6%
To Loans and Investments	14.3%	13.6%	12.8%	10.3%	9.3%

* Allows for increase of $2 billions in money in circulation Jan. 1, 1943 to June 30, 1943.

when necessary to the market for Treasury certificates. Under these circumstances banks have been justified in treating bills and certificates as the equivalent of cash.

With respect to the low yields on these securities it may be noted that they represent largely the employment of new money, so that the yield need not be comparable with the usual cost of obtaining money. While it requires something of a readjustment of thinking for country banks to employ funds at rates as low as ⅜ or ⅞ of one per cent, increasing numbers of such banks are recognizing an unusual situation and employing a substantial part of their newly acquired deposits in this way.

Condition of the Banks.—Concern is sometimes expressed about the position of the banks with nearly 50 per cent of their assets in government securities and their capital ratios steadily declining. The changes are shown in Table 27 for all member banks, with estimates for June 30, 1943.

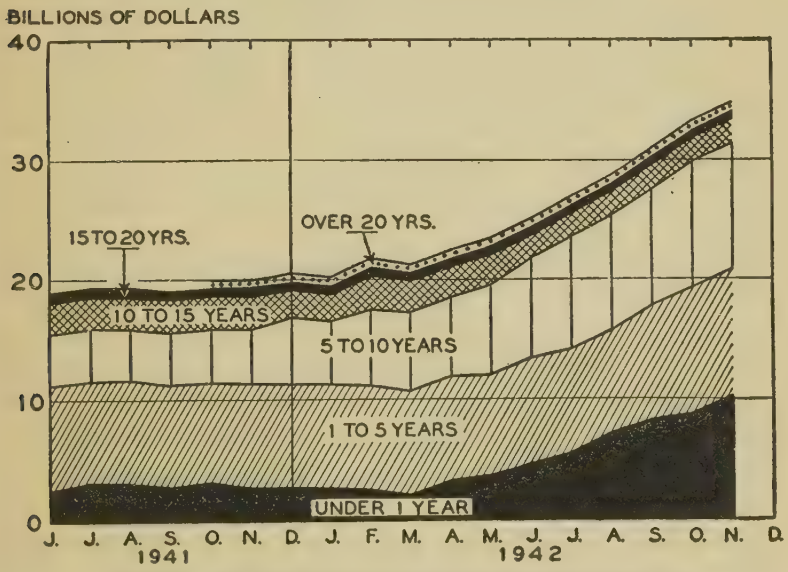


DIAGRAM 51—OWNERSHIP OF GOVERNMENT SECURITIES BY COMMERCIAL BANKS—BY CALL CLASSES.*

* During the rest of the war the banks maintained a distribution of maturities not far different from that shown in the diagram.

These are indeed trends which justify careful consideration and their indefinite continuance would be serious. There are certain alleviating elements. First, the decline in loans and in investments other than government securities represents a reduction in risk and in some cases elimination of undesirable assets. For some years past, for example, banks as a whole have been steadily writing down the book value of bank premises.

Second, banks have been following a conservative policy in their purchases of government securities as is shown in Diagram 51.

All of the increase recently has been in securities under ten years maturity and most of it under five. More than $10 billions matures within one year. Figures for the last date shown in the diagram are as follows:

TABLE 28—MATURITY DISTRIBUTION (TO DATE OF CALL) OF GOVERNMENT SECURITIES HELD BY COMMERCIAL BANKS NOVEMBER 30, 1942
(In millions of dollars)

Under one year	$10,175	29.5%
1 to 5 years	10,517	30.5
5 to 10 years	10,522	30.5
10 to 15 years	2,004	5.8
15 to 20 years	581	1.7
Over 20 years	674	2.0
Total	$34,473	100.0%

Under these conditions it may be stated that the amount of risk to be covered by capital has not increased. The real question is not as to the position today, which is wholly dependent on the war and the success in selling securities outside the banks, but as to the postwar position when the huge volume of bank funds may seek more active employment. It will then be desirable that the bank capital position should be strong enough to justify the banks in taking the risks necessary in financing their share of the business ventures essential to full employment. To that end it is most desirable that bank capital be augmented as much as possible from earnings and later perhaps by obtaining new capital in the market.

There is nothing in this situation to prevent a bank's doing its full share in the financing program provided it follows a realistic policy in the maturity of purchases, and a conservative policy also in dealing with any doubtful assets and in the payment of dividends.

Dangers of the Gigantic Debt.—Behind all of these more technical problems lies a growing apprehension as to the effect of the mounting government debt. A few years ago a $50 billions debt was dreaded as a grave danger and today we face one perhaps four or five times that large. The trend is shown in Diagram 52. The debt may shortly reach a total more than twice as large as the national income of the calendar year 1941.

The first and inevitable result is an annual interest cost nearly as large as the whole national budget in the twenties. This means high taxes for an indefinite period and high taxes

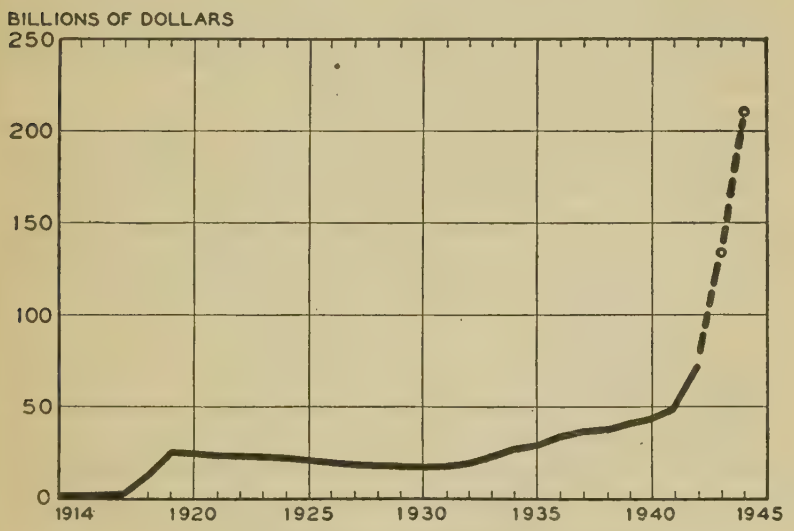


DIAGRAM 52—UNITED STATES GOVERNMENT DIRECT DEBT.

always tend to discourage initiative and enterprise. While no one can foretell the ultimate effects of this tax burden upon the economic system, it is a risk in war we have to take. Our capacity to carry the heavy debt without endangering our

currency and our free institutions will depend upon the national economic policies that are followed after the war. If these policies are conducive to a sound increase in national productivity and wealth, even this heavy debt charge can be borne.

The more immediate hazard attaches to the expansion of bank credit through which the huge debt is created and carried. For it is this bank credit that represents potential inflation. It is spending power in vast amounts which could blow prices through the roof if its owners started to spend it freely.

For all these recent years when bank deposits have been growing with the climbing national debt the saving grace has been an attitude of caution on the part of the owners of deposits. This had both its good and its bad aspects. Its good aspect was its avoidance of inflationary price increases. Its bad aspect a few years ago was that it slowed down recovery. The financial expansion which in times past would have stimulated business expansion and higher prices was damped down and thwarted by an atmosphere of fear and caution. Deflation was still in the air.

What happens from here on depends as much on attitude of mind as on the mechanics of the situation. Mechanically all the elements of a serious inflation are here; psychologically we are fortunately still somewhat cautious. All reports indicate that the people have been saving substantial portions of their income, either in the form of cash, purchase of war bonds, or payment of debts.

There are two things the banks can do in this situation. The first is to sell bonds outside the banks. This reduces the amount left for the banks to absorb—it keeps down the mechanical base for inflation by retarding the expansion of bank credit, which is spending power.

The second is to encourage a habit of thought. It is a time to teach the old fashioned doctrine of work and save. For salvation lies in the thinking habits of the people as well as in the mechanics of money. If we should be spendthrift and improvident we should court disaster no matter what the size of the debt, but if we are industrious and saving we

can manage a very large debt even though it predisposes to trouble.

What we sow today will in large measure determine what we reap in the postwar period. In the past, inflation and overexpansion have been forerunners of depression and unemployment. The excesses of 1918-20 were paid for in 1921, and those of the late 20's in 1932.

A school of thought has developed which believes all our problems can be taken in hand by government and readily solved, that government can by itself prevent inflation or guarantee full employment. A totalitarian government might do these things by regimenting the people, though the proof of its ability to do so over an extended period is far from complete. Happily in a democracy the economic life of the people is determined not by government alone, though it has great influence, but by the people themselves.

We as bankers are close to the people. They consult us in their financial and business affairs. If we are wise we can have some influence on the way the people behave under present unusual circumstances. The gospel to be taught is the one that we wholly believe, that of *working* and *saving*. If this gospel is taught and followed now it will be a great aid toward avoiding inflation and providing a sound base on which full employment may be built after the war.

CHAPTER XXII

International Financial Cooperation*

FOR a number of months the American Bankers Association has been at work on the Bretton Woods proposals now before Congress and this is a report of progress.

The United States faces today international financial problems similar in many respects to the problems after World War I. Some of the countries of the world have been impoverished by war; others have been enriched. To the extent that the war has been more severe, more expensive, and longer, these results are more extreme. The dammed up buying power at home and in many other countries is greater and the shortage of goods is more acute. These are the forces of inflation.

Yet with this similarity of problem the extraordinary fact is that so little thought seems to be given to what really happened in international finance after World War I. It is fair to say that Bretton Woods was designed not to meet the powerful threat of inflation we face in the immediate postwar period, but to deal with the depression characteristics of the 30's. It is the old Maginot Line psychology of thinking in terms of the last previous crisis. The last crisis which people know most vividly and the central motivation of the whole school of younger economists was the crisis of the depression of the 30's. Bretton Woods was designed to meet such a crisis. It was designed to facilitate expansion. It is for that reason perhaps that those of us who are trying to judge Bretton Woods in the light of an earlier experience may seem quite unreasonable to the technicians who devised the plan.

As a background for understanding the American Bank-

* An address before the Chamber of Commerce of the State of New York on May 3, 1945, while the author was President of the American Bankers Association.

ers Association proposals for amending Bretton Woods, it may be helpful to turn our minds back and consider what happened in the 20's when we met problems very similar to those of the present.

To me the memories of that period are entwined with the recollection of a great personality, Benjamin Strong, Governor of the Federal Reserve Bank of New York from 1914 to 1928, and his almost passionate desire for currency stability and economic recovery for the world. All of us who worked with him shared his enthusiasm even to this day and for us to be accused, as we have been, of desiring currency instability for the sake of profit is ironical. Our criticism of Bretton Woods is exactly the opposite. It does not seem to us to offer enough of the realities of lasting stability. It legalizes currency devaluation; its lending provisions are ambiguous.

It was the energy, initiative and devotion of Governor Strong and England's Governor Norman which sparkplugged the drive for the stabilization of the British pound and the German mark and succeeding action in France, Italy, Belgium, Poland and other countries in order. This stabilization program was supported by credits extended by groups of central banks, supplemented in some cases by loans in the market.

The impression has been given that after World War I each country stabilized its currency unilaterally as strictly its own problem. Of course this is not true. Many countries obtained stabilization loans in connection with their programs. Their rates were fixed and programs adopted only after extended consultation. If mistakes were made in relative rates, and they were, it was not for lack of consultation.

The development of consultation and cooperation of central banks was one of the great achievements of this period. It is unfortunate that this useful relationship between central banks was practically terminated through policies adopted by our own Government in the early 30's.

Another lesson emerges from this earlier stabilization experience. Stabilization credits which were well and carefully made did not actually have to be drawn upon. When

there was a sound economic program, the stabilization loan was largely a showpiece, a source of confidence. On the other hand, there is also evidence that a stabilization loan made without a sound economic program not only had to be used but failed of its purpose. The unsuccessful attempt of France to stabilize in 1924 with the help of a 100 million dollar loan in this country and credits in London is a case in point. When, however, France finally restored confidence through the sound policies of Poincaré no loan was necessary. The return flow of flight capital provided ample funds.

Unhappily, the most significant lessons of the 20's are lessons of failure, of the final frustration of the efforts so nobly made to build a new and stable world economy. Today, as we launch on the same task we ought to ask ourselves soberly and carefully why they failed? While the 20's were a period of great prosperity and long-continued full employment, they began and ended with a boom and a bust, and it was the final boom and bust which opened the gates to the great depression of the 30's. There were, of course, many causes for these disasters but one of the most important was the unwise lending of money.

In 1919 and 1920 after the war, our Government continued to lend money to Europe, 3 billion dollars of it under the war debts. There was another 3 billion dollars of private credit. These dollars were used to support European exchanges at artificial levels and to buy American goods at a time when goods were scarce. As a consequence prices soared and speculation flourished. The boom was followed by the depression of 1921. Wheat went to $3.50 and then collapsed to $1.00. Farm land prices almost doubled and then broke. It took the farmer years to recover.

Again in the later 20's we lent some 10 billion dollars abroad partly in the form of bond issues for European and South American countries, and partly direct investments by American firms. When we suddenly came to realize that we had lent too much money too badly and tried to call it home, the world economic position collapsed, and thousands of American investors learned the bitter lesson that you cannot safely pour

money into foreign countries without careful scrutiny of just how it is going to be used, and how the foreign countries are going to pay back the interest and the principal. The amount we can lend safely to foreign countries is limited by the capacity of foreign countries to use the funds wisely and productively, in such a way as to produce dollar exchange for repayment. This last is particularly important, for it is possible to employ funds wisely and productively for home uses, and still not develop the output of goods that can be sold in world markets and so provide the exchange needed to service foreign credits.

We are in danger of repeating exactly these same mistakes in the next few years. Foreign countries now own $20 billion of gold and United States dollars, or four times as much as at the close of World War I. This should be enough for most countries to start the wheels moving. We must bear in mind that much of this money will be used right after the war to buy goods in our markets at a time when goods are scarce. Just as after the first World War we are talking in terms of lending large sums of money abroad without enough consideration of how the money can be used wisely and productively. Relief needs must, of course, be met and essentials for reconstruction, but we must exercise discretion along with generosity.

This is the background against which the American Bankers Association made its proposals for amending the Bretton Woods plans. The Association approves and supports the objectives of Bretton Woods. American investment abroad is good for us and essential to reconstruction and progress in many areas, but in the light of experience we know that foreign lending by the United States must be fully safeguarded both in our own interest and the interest of the borrower. We approve the plan for the Bank for Reconstruction and Development because we feel that the instructions given to the management to make an economic survey of every situation before making a loan, to see that the loan is likely to be repaid, to make sure that the money is used for the purposes intended, offers reasonable prospect, with good management, of sound

lending. Moreover, the United States is given a veto over any loans made in dollars.

The Monetary Fund is a horse of an entirely different color. The economic soundness of the borrowing country or its ability to repay are nowhere clearly enough stipulated. The loans have no fixed maturity. Members of the Fund are "entitled" to use its facilities under certain requirements not difficult to fulfill, and the United States has no veto power over such loans. Once we have put our money in the pot it is dispersed by a board of directors in which we have a minority vote! We know from experience that this is not a good way to lend money. Bad lending will make trouble for lender and borrower just as it did in the 20's. We have, therefore, suggested that all loans should be passed through the mechanism and safeguards of the Bank. This would have the added advantage of concentrating the lending in a single institution so that conflicts of authority would be avoided. There are perhaps other ways by which the lending by the Fund could be safeguarded, but the important thing the American Bankers Association is trying to do is to keep the United States from repeating the same mistakes that we made in the 20's in lending our money abroad.

The power of the International Bank and the International Fund with their huge resources would be the power to create international booms and depressions. It is also the power to help stabilize both currency and trade. This is tremendous power to put into the hands of a few men. If we create such institutions we ought to do so only under the most careful possible safeguards and clear understanding to assure the wise use of these huge powers. This is the message the American Bankers Association has been giving to the Congress.

There are other technical problems. There is the question of the relation of Bretton Woods to trade policies and particularly to the crucial British situation. There is danger involved in the approval the Fund gives to changes in currency values and the continuation of exchange controls. There is danger in the "scarce currency" provisions which would legalize a trade embargo against American goods under cer-

tain conditions. All of these, however, are less important than the assurance in one way or another that the huge lending powers of these institutions will be used for stability and not for stimulating booms with their consequent depressions.

In passing I should like to say that we have been startled and a little shocked that two of the points made in our report on Bretton Woods have fallen rather flat with the American public. We said that the plan was unnecessarily expensive—involved twice as large a commitment as was necessary—and we said that the Fund embodied a novel and untried method of lending. Both these suggestions have been widely criticized as typical of banker conservatism. There appears to be a large school of thought in this country that if a plan gotten up by experts is novel and very expensive it must be good. We are still sure we were right.

Now you would like to know I am sure just where we stand in the progress of this legislation through the Congress. The Administration made an effort to hurry the bill through the Congress in order to have final action before the San Francisco Conference. The Congress vetoed this proposal on the first day of the hearings when the House Committee decided that the legislation was so important that the Committee would take all the time necessary to hear competent witnesses and explore the whole matter fully.

The hearings which have continued now for some weeks, with interruptions, have been excellent. The Government has presented its case ably, and succeeding witnesses and questioning by members of the Committee have exposed both the strength and the weakness of that case. If you read the record, I think you will agree that the hearings have been of high quality and in good spirit. The Committee has impressed me by its full attendance, its very great interest in the question, and its obviously careful study of these highly technical and difficult problems. Every witness has been given a fair hearing and the questioning has mostly been of high order. It has been to me an encouraging demonstration of the workings of our American system of Democracy.

Unfortunately, the same statement cannot be made of the

public discussion on the radio and in certain parts of the press. Some of it has been highly frenzied propaganda without too much regard for the truth or tolerance of criticism. Much of it has been by people with obviously superficial acquaintance with the proposals.

The most serious question that is developing before the Committee is the question of amendments. The Treasury and State Departments have taken the position that the plan must be taken as is and without amendments or reservations for fear that if any amendments are made other countries will start amending, and the opportunity for an international agreement will be lost. In our belief this is not a realistic argument. I have talked with the representatives of many other countries and I believe they are prepared to accept reasonable amendments. They need our money, and they recognize that the United States is putting up half to two-thirds of the usable money in the Fund and the Bank, and we have a right and duty to see that this money is used wisely. I believe the specific proposals of the American Bankers Association would be accepted by other countries. It is to the interest of everybody that the plan be made just as sound and enduring as possible.

But further than that, the question may be raised as to what our democracy means. Do we have a government by the representatives of the people or do we have a government by government experts? The Bretton Woods program was prepared by government experts. It was then negotiated with the experts of other countries and it was only after that negotiation that it is now presented to the American people for consideration. There was little public discussion of the proposals before Bretton Woods. The American representatives went to Bretton Woods instructed to keep within the framework of the Experts' Plan. Now the Treasury asks us to accept the plan as is, without changes.

The Bretton Woods procedure was in marked contrast to that followed with respect to world security, a topic with which the public already had a better understanding. The Dumbarton Oaks conferences were followed by months of public

discussion; and now a second conference is being held at San Francisco.

Our Congress faces the grave responsibility on Bretton Woods of exploring this question so fully that they understand informed American opinion, and safeguard the welfare of the people in this crucial field.

Proponents of the plan admit it is not perfect, but argue that necessary changes may be made later in the light of experience. But this is not ordinary domestic legislation which can be amended next year. Our Congress can't amend these acts alone; once adopted, changes would require the concurrence of other countries. We are playing this game for keeps. The sums of money involved are huge. The potential good or ill to our own and other peoples are greater still. We must take time to make decisions wisely, whether it should mean another conference or not.

I am however distinctly hopeful. I believe reasonable amendments such as we and others have suggested would correct the most serious defects in the plan and that these would be acceptable to other countries without further conference.

Those of us who are bankers would of course like to see Bretton Woods entirely rewritten. It is long, ambiguous, and elaborate. We know that many of its provisions will prove impractical and difficult. It would be easy to overlook the plan's virtues, and it has many. It provides the machinery for consultations; it embodies commitments in principle to monetary stability and removal of exchange controls; it sets up machinery for international credits. It represents, besides, the earnest and persistent effort of many minds to reach an agreement on these vital principles. These are all merits which we must not lightly toss to one side.

Our wise course therefore I suggest is to treat this document with respect, to overlook such of its defects as we think may be cured by time and experience, but to insist upon those changes and safeguards which we know to be essential.

If we can be assured of these essential changes and of good

management, I believe we can then give it our support in the Congress, and when it is placed in operation render it the full cooperation of this business and financial community which will mean so much to its success.*

* The Bretton Woods proposals were subsequently approved by the Congress without amendment of the text of the Bretton Woods Agreements, but with a substantial number of changes in the bill of enactment in conformity with suggestions made by representatives of the American Bankers Association. These changes were directed towards safeguarding the lending powers of the Fund, towards strengthening the organization within the United States Government for determining its own policies towards the Fund and Bank, and emphasizing the necessity for international trade agreements as prerequisite to successful operation of the Fund and Bank.

APPENDIX A

The following excerpt is quoted from the twelfth *Annual Report* of the Federal Reserve Board, 1925, pp. 11-13.

On April 28, 1925, the British Chancellor of the Exchequer announced that the law of 1920 prohibiting gold exports for a period of five years, except under special license, would be permitted to lapse on December 31, 1925, and that for the remainder of the year the Bank of England would be given a general license to export gold. Control of gold exports in Great Britain, which from the outbreak of the war until the legal prohibition in 1920 had been by informal methods, applied after that time to exports of all gold with the exception of newly-mined gold produced in the British Dominions and imported into England. In removing restrictions upon gold exports the British Government considered it essential to obtain the assurance of foreign credits upon which England could draw during the transition period in case its ability to maintain a free gold market was threatened by heavy withdrawals of gold. In these circumstances the Bank of England applied to the Federal reserve system for the right to draw upon the reserve banks for gold up to an amount of $200,000,000, if required, over a period of two years. At the same time the British Government arranged for an additional credit of $100,000,000 with a private group of bankers in this country. In approving the arrangement entered into with the Bank of England, the board acted on the conviction that the reestablishment of the gold standard would be an important step in the direction of the restoration of monetary stability throughout the world, and that business and credit conditions in this country would greatly benefit by this increased stability. American exporters of agricultural and other products whose business had been exposed for a decade to the hazard and expense of dealing with countries having currencies with unstable values would, by the reestablishment of the gold standard, be relieved of the risks arising from unstable exchanges. American credit conditions would no longer be disturbed by the continuous and uncontrollable inflow of gold which had been for more than four years the principal cause of a rapid growth in bank credit. With the principal money markets of the world once more free gold markets, and the exchanges between them stable, the flow of funds between markets would respond more freely to differences in money rates and credit conditions. Thus the resump-

tion of gold payments by the chief trading countries of the world would furnish a basis for the functioning of those forces which before the war had operated to maintain a close contact between the money markets of the world.

Moved by these considerations the Federal Reserve Board approved the arrangement entered into by the Federal Reserve Bank of New York, with the participation of the other reserve banks, with the Bank of England. Under this arrangement the Federal Reserve Bank of New York undertook to sell gold on credit to the Bank of England from time to time during the following two years, but not to exceed $200,000,000 outstanding at any one time. The credit was to bear interest to the extent that it was actually used at a rate of 1 per cent above the New York Reserve Bank's discount rate, with a minimum of 4 per cent and maximum of 6 per cent, or, if the Federal reserve discount rate exceeds 6 per cent, then at the discount rate of the bank. The rate of interest to be paid by the British Government on the credit which it established with private bankers was to be determined in a similar manner. Upon the purchase of gold the Bank of England would place on its books to the credit of the Federal Reserve Bank of New York an equivalent deposit in pounds sterling. This deposit might be used from time to time by arrangement with the Bank of England in the purchase of eligible sterling commercial bills which will be guaranteed by the Bank of England, and in that case discount earned on the bills would be applied to the payment of interest. The repayment of any interest or principal of this credit outstanding at the end of two years was guaranteed by the British Treasury. The system's arrangement, however, was strictly a banking transaction with the Bank of England and not in any sense an agreement with the British Government. Since the restoration of the gold standard in Great Britain, banking developments in that country have been such that no necessity has arisen for making use of any part of the credit with the reserve banks.

The arrangements entered into between the Bank of England and the Federal Reserve Bank of New York involved no commitment as to the policies to be pursued by either bank in dealing with domestic credit conditions or with changes in discount rates.

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